

TECHNICAL MANUAL

ÆXECUTONE

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Foreword

This manual provides a technical description of the EXECUTONE® CARE/COM® II-E Nurse Call System and step-by-step procedures for its operation, installation, programming, and maintenance. The procedures and methods in this manual have been designed to assist the CARE/COM II-E certified technician in the planning and installation of the system. For additional assistance with certain specific details, please contact your local EXECUTONE Distributor.

NOTE

Design and Specifications are subject to change without notice. Additionally, it is possible that the information contained in this manual may not reflect the latest design of equipment; please contact your local EXECUTONE Distributor to verify current software and hardware.

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"THE BIG PICTURE"

This manual is organized into several sections that will help you to use the CARE/COM II-E Nurse Call System most effectively and provide you with an understanding of how the system works.

The quickest way to become familiar with the manual's contents is to look at the table of contents pages. These pages are located in the front of the manual as well as at the beginning of each section and show, in outline form, the sequence of information for that section. In addition, there are lists of figures, lists of tables, an index, and a glossary. Use these tools to quickly find whatever information you need. If you examine the page number prefix, you will notice the sections are grouped together under main topics:

0 1	OU series page numbers are introductory material
0 2	200 series page numbers describe the operation of the system
O 3	300 series page numbers describe system equipment and features
	100 series page numbers describe installation of the system
	500 series page numbers explain how to program the system
	500 series page numbers describe system maintenance
	700 series page numbers list the system Technical Specifications
Note that there	are some conventions used in this manual that are important to
understand. Wl	nile reviewing the steps for a particular action, always pay close Notes, Cautions, or Warnings.
	NOTE -
Notes indicate	helpful tips and other important information.

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	CAUTION 3
Cautions advis	SO YOU of cituations and/or actions that may recall in dame
age to the CA	se you of situations and/or actions that may result in dam- RE/COM II-E system.
age to the CA	ne/colvi ii-e system.
	WARNING -
Warnings advi	ise you of situations and/or actions that may result in the
death or injury	
	L

When You Would Like to Learn About the System . . .

Go to Section 100, Introduction.

This section presents the fundamental concepts behind the system in nontechnical terms. Basically, this section is an introduction to the system and to the more detailed information in the rest of the manual. All of the features and the equipment are described briefly.

When You Would Like to Use the System Features. . .

Go to Section 200, Operation.

This section introduces the equipment in the CARE/COM II-E system, describes features, and offers instruction.

When You Need to Configure a System. . .

Use Section 300, Design and Configuration.

This section is very important because it shows how to configure a system. It addresses detailed equipment requirements and other configuration information. It also lists all the part number used in the system.

When You Want to Install the System. . .

Use Section 400 through 440, these sections provide the necessary information to install the various components of the system.

	Section 400 covers general Installation instructions.
0	Section 410 covers the Central Equipment Installation.
	Section 420 covers Nurse Control Station Installation.
0	Section 430 covers Station Unit Installation.
	Section 440 covers Station Peripheral Installation.

When You Want to Set Up, or Program the System. . .

Refer to Section 500, Programming.

Section 500 describes each of the CARE/COM II-E menu selections, and how to input the data necessary to configure the system, as well as enable or disable many of its optional features.

For system servicing. . .

Go to section 600, Maintenance.

This section contains information needed by EXECUTONE certified service technicians to maintain the system. The procedures in this section serve as a technician's reference base, providing checkout and troubleshooting information.

To Specify a System. . .

Go to Section 700, Technical Specifications.

To Find Information on a Specific Term or Topic. . .

Refer to the glossary or index located in the back of this manual.

COMPLIANCE INFORMATION

The next several paragraphs contain information on various codes, regulations and specifications that the CARE/COM II-E must meet.

Note that in order for the system to remain in compliance with all of the regulatory agencies, the system must not be installed or modified in such a way that deviates from the latest technical documentation.

Furthermore, EXECUTONE cannot warrant, nor provide any support whatsoever to any installation that is not in accordance with the latest technical documentation.

EXECUTONE Compliance

The EXECUTONE CARE/COM II-E Nurse Call System is designed to meet strict safety, quality and reliability standards set forth by EXECUTONE.

An EXECUTONE certified technician must install a CARE/COM II-E Nurse Call System in accordance with all applicable codes, regulations, and technical documentation. In the event of equipment malfunction, all repairs must be performed by EXECUTONE certified technicians according to the repair information in the Maintenance Section of the CARE/COM II-E Technical Manual. It is the responsibility of the users requiring service to report the need for service to an authorized agent.

All EXECUTONE-brand wire and cable is UL listed for Type CL2 and CL2P cable. EXECUTONE cannot support or warranty any product/system or its performance if installed using nonapproved wire and cable.

UL 1069 Compliance

In addition to meeting EXECUTONE's standards, CARE/COM II-E complies with the latest UL 1069 regulations (4th edition).

If the equipment malfunctions or fails (not due to power failure), the CARE/COM II-E system shall retain its basic visual signaling functions in compliance with the UL 1069 specification. The system design shall take into account fail-safe regulations as described by national and local safety codes.

FCC Regulations Part 15

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- Deviations from the CARE/COM II-E Technical Manual during installation could void the user's authority to operate the equipment.
- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The system must be installed, and connected in accordance with the instructions provided in the CARE/COM II-E Technical Manual to ensure compliance with the Class A limits.

FCC Regulations Part 68

This equipment complies with Part 68 of the FCC rules. Before starting system installation, there are established FCC rules and regulations which must be observed. These rules permit this system to be directly connected to the telephone network. Standardized jacks are used for these connections. This equipment should not be used on party lines or coin operated lines.

On the equipment panel of this system is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. FCC rulings state that the owner of the system to be installed give the local telephone company sufficient advance notice of intention to use privately owned telephone equipment. The owner must also furnish information as to the identification of the particular lines to be connected to the system and the affected telephone numbers. FCC registration information on the model name, FCC-assigned registration number and ringer equivalence information must also be furnished. The REN is used to determine how many devices can be connected to a telephone line. In most areas, the sum of RENs of all devices on one line should not exceed five. If too many devices are attached, they may not ring properly.

Should there be any question that the customer-provided equipment may cause harm to the telephone network, the local operating company is required to notify the customer of an impending temporary interruption of service. The customer must be given the opportunity to correct the existing problem, if possible. The telephone company must also advise the customer of their rights for filing complaints before the FCC.

The telephone company may make changes in its technical operations and procedures. If such changes affect the compatibility or use of this system, the telephone company is required to give adequate notice of the changes.

Under no circumstances is the equipment to be altered or modified without written approval of the manufacturer. Failure to gain permission for any modification will void the warranty. If a system malfunction is suspected, the connectors terminating the equipment to the CO lines should be disconnected.

Service Requirements

In the event of equipment malfunction, all repairs should be performed by an EXECUTONE authorized technician according to the Maintenance Section of the *Technical Manual*. It is the responsibility of users requiring service to report the need for service to an EXECUTONE authorized agent.

FCC Registration Numbers

The CARE/COM II-E Nurse Call System is registered with the Federal Communications Commission. The registration number is as follows:

BE9USA-18908-MF-E

Trunk Ordering Information

Public Network:

Facility Ringer Network DOC Connecting
Interface Equivalence Jack Arrangement Code

02LS2 1.9B RJ21X or RJ11C CA11A

Supplement for Canadian Equipment

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NOTE

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure, for their own protection, that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.



Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority or electrician.

The Load Number assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of Load Numbers does not exceed 100. An alphabetic suffix is also specified in the Load Number for the appropriate ringing type (A or B), if applicable. The Load Number for the accompanying equipment is 100.

This equipment does not exceed the Class A limits for Radio noise emissions from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications.

Installation Restrictions or Codes

Local building codes and restrictions must be met when installing the CARE/ COM II-E Nurse Call System. Make sure that all such codes are known.

Backbox Requirements

Each backbox used in the system must be metal and UL listed. In addition, each backbox must be properly grounded to the equipment cabinet with a #10 AWG wire or continuous metallic conduit.

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Section 100 - Introduction

1. GENERAL

The EXECUTONE® CARE/COM® II-E Nurse Call System is an enhancement of the current Care/Com II system; the same fundamental theory of operation exists in CARE/COM II-E as in its predecessor. However, the re-designed nurse control station (NCS) and enhanced central equipment, makes the II-E system stand out on its own; incorporating the latest technology to provide additional features and optimize the user interface functions.

Voice and tone signaling from patient to nurse, emergency signaling for staff, and two-way voice intercom communications, are just a few of the features introduced into the CARE/COM II-E system.

2. SYSTEM DESIGN

CARE/COM II-E digitally processes all patient calls according to a three-level incoming call structure. These call levels show the nursing staff which calls demand the quickest response. Call indications, both visual and audible, are provided throughout the facility: at the nursing stations, utility areas, in the corridors, and at the patient's room. This attention to detail applied to the call indications, provides not only full contact between patient and nurse, but also complete staff-to-staff communications.

Table 1. CARE/COM II-E Call Level Structure

Call Name	Call Level
Code Blue	Level 1
Emergency	Level 4
Routine Patient/ Staff	Level 5

Cable Groups vs. Station Groups 2.1

As part of its flexible installation concept, a CARE/COM II-E system is comprised of cable groups and station groups. A cable group is a group of stations physically connected via a common cable. See Figure 1 for an illustration of a cable group. A station group is a collection of stations assigned to a group number in the system setup.

Station groups allow the user to take a station from one cable group and place it into a station group containing stations from another cable group. Figure 2 portrays the flexibility of the station group configuration. With this feature CARE/COM II-E can support share group and swing group functions. It is important to remember that CARE/COM II-E's features are based on station groups, which means the nursing personnel will be dealing only with the station groups when using the features.

A station group could be comprised of one unit, or possibly all the units in the facility. Note that for maximum operating efficiency, the station groups should match the cable groups as closely as possible.

2.2 **Area Assignments**

Station units are placed into station groups which allows for flexible room assignments. These station groups are then made available to the nurse control station (NCS). The station group assignment is determined during the system design and configuration, and applied during system programming.

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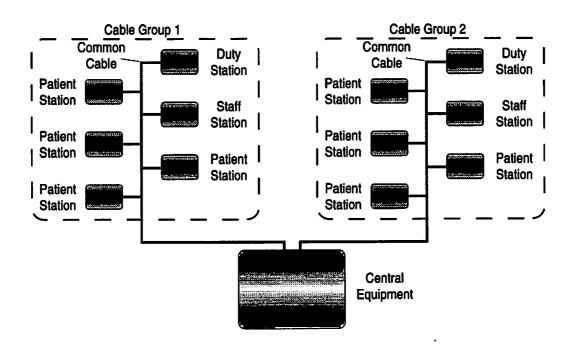


Figure 1. CARE/COM II-E Cable Group

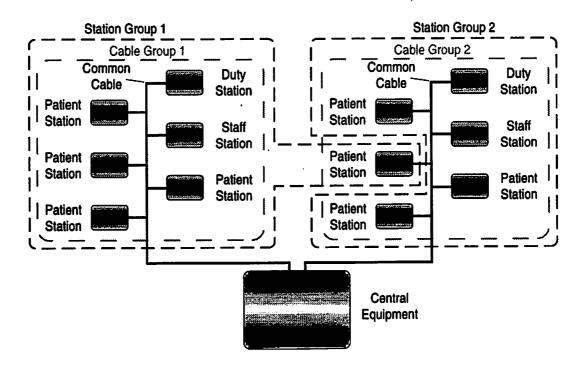


Figure 2. CARE/COM II-E Station Group

2.3 Typical System

system.

As Figure 3 illustrates, a CARE/COM II-E system typically consists of the central equipment, nurse control station(s), direct station selection (DSS) consoles, single and dual patient stations and duty/staff stations. Also required are the installation materials such as wire, cable, and connector assemblies.

The availability of digital ports on the auxiliary panel determines system configuration. System capacites vary according to the configurations of the auxiliary and equipment panel, directly affecting the number of ASIs (Analog Station Interfaces), NCSs, and DSSs which can be installed. Reference <u>Tables 3 and 4 in Section 300</u> to help you determine the hardware requirements of a 'typical'

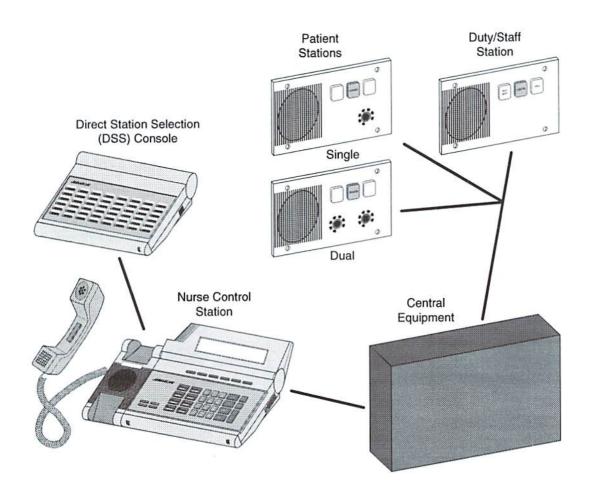


Figure 3. Typical CARE/COM II-E System

2.4 Additional Equipment

• (a) • (a) · (b) · (b) · (b) · (c) · (c)

By including peripheral equipment, the CARE/COM II-E system can easily expand to provide more features and increased functionality. As seen in Figure 4, this equipment may include: dome lamps, Code Blue and Emergency stations, patient sideguard station units, and entertainment and environmental interfaces.

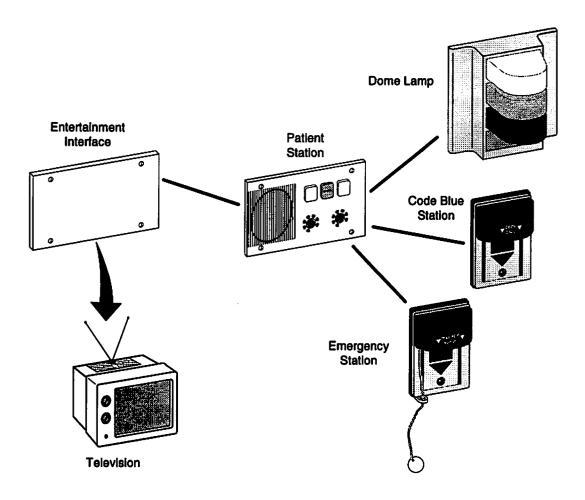


Figure 4. CARE/COM II-E Patient Station with Peripheral Equipment

3. CARE/COM II-E FEATURES

3.1 Processing Incoming Calls

CARE/COM II-E's nurse control station (NCS) is the primary point of contact for call processing. Each NCS features an easy-to-read, backlit, LCD display. Each call is displayed on the *Incoming Call Display/Function Menu*, identified by room, bed number (if programmed) and call level (Figure 5).

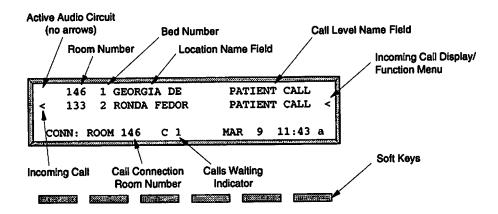


Figure 5. Incoming Call Display/Function Menu

Each call is accompanied by distinctively different rate signaling, along with visual call indications.

In order to not interfere with conversations at the NCS, the usual tone signals are muted. However, a short non-intrusive "Reminder Tone" may be activated to indicate incoming calls while the attendant is engaged in a conversation. Specific tone bursts will identify the call level highest in the incoming call queue.

The NCS can accept incoming calls from patient stations, code blue stations, emergency stations, duty/staff stations as well as other NCSs. Up to three incoming calls can be viewed on the *Incoming Call Display/Function Menu*, sorted by call level and the time placed. The CALLS WAITING indicator shows the number of calls on the nurse control station, after the first call is placed.

Calls can also be answered specifically using the direct select keys of the optional Direct Station Selection (DSS) console, or by dialing the room directly. Once a call is answered, the attendant can place the call on hold.

3.2 Placing a Call on Hold

At any time during a conversation, the attendant shall have the ability to place an answered call on Hold. Putting the call on hold enables the attendant to answer an incoming call, or make an outgoing call, without dropping the current call on hold.

The CARE/COM II-E system allows a maximum of 64 calls to be placed on hold, at a given time, on the system. Putting a call on hold does not keep the call exclusive to the NCS where the call was placed on hold. Another NCS may connect to the call by dialing the room and bed number of that call, or by pressing the correponding DSS key (if programmed).

If a patient call is left on hold too long (exceeding the programmable time-out) tone signaling will resume as the call is removed from the hold queu. This call can now be answered by normal means at any NCS.

3.3 Tone Mute

Tone Mute is another feature that can be used to cancel a call at the end of a conversation. The purpose of the tone mute feature is to silence the audible tone signaling which would normally resume upon terminating the voice connection of a call. Generally, Tone Mute would be used for calls that cannot be canceled from the nurse control station, "non-cancelable calls" such as emergency and code blue. However, if the tone mute feature is not enabled during system programming, the tone mute key can be used to release a normal patient call.



- NOTE -

Only the tone signaling for the answered call is silenced. If there are multiple calls displayed at the nurse control station, tone signaling for the next displayed call of the highest level will be heard.

3.4 Placing Calls

Establishing an audio connection with patient stations, duty/staff stations, and other nurse control stations, is one of CARE/COM II-E's most powerful features. The ability to communicate, without leaving the nurse control station, optimizes the efficiency of the system.

8.10 BK

Calls can be placed one of three ways:

- 1. Using a programmable key on the NCS.
- 2. Using a programmable key on the DSS console.
- 3. Directly dialing the room and bed number (if applicable).

If the intercom call cannot be completed due to a busy audio path, the NCS will inform the attendant both audibly, generating a busy tone, and visually, an indication appears on the *Incoming Call Display/Function Menu*.

3.5 Call Assignments

The Call Assignments feature permits quick and easy selection of station groups to each and every NCS on the system.

Station groups which are available to a NCS have the ability to be covered by the NCS, but are not, until they are assigned (as seen in Figure 6). It is the assigning of a station group which makes the NCS responsible for the communication of all the patient stations, duty/staff stations, emergency and Code Blue stations, within that station group. A single system may have up to 96 station groups to allow maximum flexibility.

GROUP	1	STATION GROUP	01	*	UNASGN
GROUP	2	STATION GROUP	02		ASGN
GROUP	3	STATION GROUP	03		UNASGN
Esc		PgUp PgI	On		Change

Figure 6. Call Assignments Menu

Swing Groups, Share Groups and the Off-Duty feature are a few of the situations in which the CARE/COM II-E system relies on call assignments to fulfill these functions. Such features allows optimum coverage of station groups on one or more NCSs; where staffing and/or call traffic may be of concern.

3.6 Off-Duty

The Off-Duty feature allows a nurse control station to transfer calls to a designated, attended NCS; thereby shutting down operations at the Off-Duty NCS. The transfer of call coverage can only be completed if the accepting NCS responds to the connection and confirms the transfer. The Off-Duty feature is particularly advantageous during periods of low coverage; such as the night shift when the NCS may not be staffed.

3.7 Voice Page

CARE/COM II-E's convenient paging features give the attendant the ability to make a broadcast announcement to pertinent areas simultaneously. Several paging choices are available, such as:

NCS- page all nurse control stations.

Zone- page all the station units (12) in a zone. - Colole gry. only.

Page Group- pages all the units in selected zones and/or external zones.

External Page Zone- accesses an external overhead paging system for expanded paging coverage (four external zones in the system).

The duration of announcements is programmable in the Page Timeout setting, and is determined during system setup.

3.8 Monitoring - Zone

The monitoring function allows the attendant to check on the well being of their patients, in an effort to discover problems before they become critical. The attendant can monitor either a zone or a page group, silently, without leaving the nurse control station.

If, while monitoring a group of stations, a sound is heard that suggests a patient needs assistance, the attendant can dial in the individual room number, or press the keys on the optional Direct Station Selection (DSS) console one by one until reaching and identifying the patient in need of help.

Dufaut - bosse.

24h from t.

static Talkore No.

3.9 Changing the Time/Date

Setting the time and date is a function accomplished during system setup; however, certain situations make it necessary to change the time and date which appear on the nurse control station's LCD display. To make changing the time and date easy, the time is always entered in twenty-four hour format and the date is always entered in month/day/year format. When changing the date and time; the time format can be set to either twelve or twenty-four hour format, and the date format can be either month/day/year (US) or day/month/year (EURO).

3.10 Problem Report

The Problem Report identifies any current source(s) of trouble within the system hardware. If a zone or flasher card failure occurs, or the system power is transferred from main power to an alternate power source, a SERVICE indicator will appear on the NCS and a tone will be generated.

3.11 NCS Self-Test

The self-test mode of the nurse control station allows the user to make sure each key is functioning properly. The test identifies each key as it is pressed, and specifies the function of the programmable key in accordance with its programmed key code and sub-key code.

3.12 Patient Station Features

The CARE/COM II-E Nurse Call System's single and dual patient stations are designed to operate in conjunction with the nurse control station and auxiliary signaling equipment (such as dome and zone lamps). The patient stations are designed for optimum patient communications, using well marked controls and indicators.

For the patient's comfort and enjoyment, the patient station can integrate with entertainment and environmental interfaces. When the attendant calls the patient, the patient station automatically mutes the entertainment audio so the patient can hear the attendant. These interfaces connect to radio distribution systems, TVs, reading lights, drapes, etc.

3.13 Call Origination Device Features

STATE OF SECURITION

Call origination devices are used by the patient to place calls to the attendant at the NCS. Each device has a well-marked button for call placement. The patient control units allow for remote control of entertainment and environmental facilities. As mentioned in paragraph 3.12, these facilities can include radio channels, TVs, reading lights, drapes, etc.

3.14 Duty/Staff Station Features

The CARE/COM II-E duty/staff station enables the nursing staff to maintain communications throughout the facility. Each duty/staff station has an easy to use control for call origination. The duty/staff station consists of a built-in speaker/microphone, a PATIENT call indicator, a combination CALL button and indicator, and combination call CANCEL button and intercom indicator.

As the name implies, the duty/staff station can be used as a duty station or as a staff station, by setting an internal switch. When set in duty mode, the duty station provides a visual and audible indication for patient calls. When set in staff mode, the station has communication with the NCS but does not receive indications of patient calls.

3.15 Code Blue and Emergency Station Features

CARE/COM II-E' s code blue and emergency stations allow for special call origination and cancellation. The stations can be associated with a patient or duty/staff station, or used as a stand-alone device. The code blue station is used by the staff to originate a code blue call (level 1). Patients or hospital staff use the emergency station to originate an emergency call (level 4). Both code blue and emergency station calls are cancelable only by resetting the switch. However, tone signaling of the emergency or code blue call can be muted at the NCS by using the tone mute feature. Each call level signaling is distinguished by a specific number of reminder tone bursts. The call levels are identified as follows:

Code Blue Call **Emergency Call** Routine Patient/ 3 reminder tone bursts 2 reminder tone bursts

1 reminder tone burst

Staff Call

7/95

4. CARE/COM II-E EQUIPMENT

4.1 Central Equipment

Figure 7 illustrates CARE/COM II-E's central equipment which supports all the station units in the system, as well as ASI, NCS, and DSS connections. - Klashar - Page M66 Block with RJ11's Equipment Panel 12 ~ ~ 100 Power Supply Module Power Supply Module CCPSM/BBS M66 Blocks 36290-1 TB₂ TB1 0 1 80 Main Control Unit HCP 42 1 AC In 1 0 0 (See Note) Battery AC Card Retainer Backplane Backup Receptacle Bracket AC F-F 25-pair Auxiliary Modular Receptacle 01070-1 Panel Cord

Note: Must be installed in accordance with all applicable national and local codes.

Figure 7. CARE/COM II-E Central Equipment

4.2 Nurse Control Station (NCS)

The CARE/COM II-E NCS is designed to provide maximum information and call handling power, yet be easy for the attendant to understand and operate. The desk-mounted NCS uses a specially designed receptacle to connect with the central equipment.

Since the nurse control station is the primary call processing point, each NCS features a 160 character (4x40), back-lit LCD display. This easy-to-read display is where incoming calls are shown (the *Incoming Call Display/Function Menu*), and where features are accessed through menu-driven soft keys.

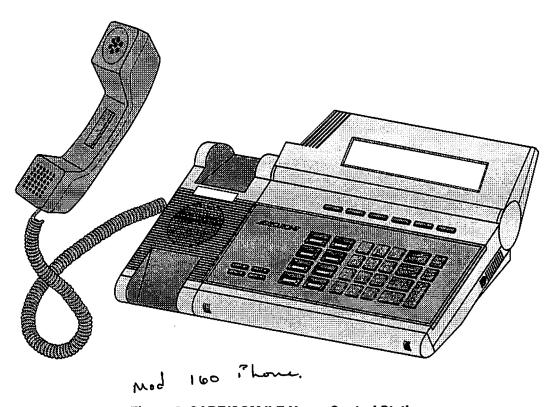


Figure 8. CARE/COM II-E Nurse Control Station

In addition to the LCD display, the NCS consists of a speaker, microphone, keypad, programmable hard keys, special function soft keys, numeral keys, and the push-to-talk handset, as Figure 8 illustrates. The speaker, microphone, and handset provide the necessary clarity and high grade communications necessary in the healthcare environment.

Each nurse control station has its own internal microprocessor which provides the power to support all of the NCS's features while maintaining communication with the central equipment.

NOTE -

One duty/staff station set for duty mode SHOULD be installed adjacent to each installed nurse control station.

The Direct Station Selection (DSS) consoles are provided to work in conjunction with the NCS. The 48 direct select keys and LED indicators, maximizes the system's potential for receiving and initiating communication. The flash rate of the LED indicators provides yet another visual indication of the call level. An NCS can support two DSS consoles, providing an NCS with 96 additional keys and indicators.

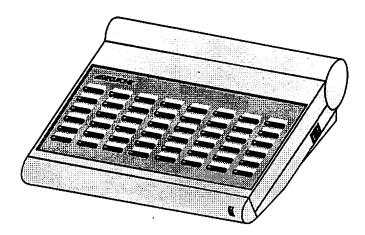


Figure 9. Direct Station Selection (DSS) Console

4.3 Patient Stations

The patient station's primary function is to enable the patient to contact the attendant at the NCS. Located at the patient's bedside, the patient station contains a combination red intercom indicator and CANCEL button and a white call placement indicator for each patient, as seen in Figure 10.

The white call indicator illuminates when the patient places a call, and extinguishes when the call is answered. The red intercom indicator illuminates when the call is answered, and extinguishes when the call is canceled. The CANCEL button permits termination of the call at the patient's bedside. However, once a patient call is answered at the NCS, it can only be released at the NCS.

CARE/COM II-E has a variety of patient stations available. There are single and dual patient stations which can integrate with Hill-Rom® compatible beds having side-rail communications and bed exit. Dual patient stations can easily accommodate right/left or left/right bed orientations. Each station incorporates protection from electromagnetic interference (EMI), both electrostatic discharge and radio frequency interference (ESD and RFI) to minimize the possibility of service disruption.

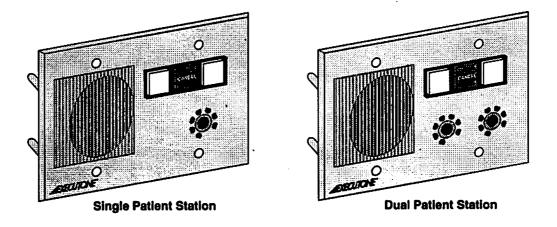


Figure 10. CARE/COM II-E Patient Stations

If for some reason the call origination device becomes detached from the patient station, or the call origination device becomes damaged (the cord is cut), the patient station will originate a special call. This call can only be canceled by reinserting a properly functioning call device into the patient station.

	-	-
	•	
- 14		

The patient stations that interface to sideguard beds will also originate a call if the bed is disconnected from the patient station cable receptacle.

Furthermore, the patient stations, along with the sideguard stations, provides entertainment audio muting during intercom from the attendant at the nurse control station.

4.4 Call Origination Devices

Call origination devices provide the actual means for the patient to place a call. These devices plug directly into the CARE/COM II-E patient stations, as seen in Figure 11.

For the variety of patient stations, there is also a choice of call origination devices which interface with them. Available are the following:

- * Patient Control Unit, or pillow speaker (PCU-3)
- * Call Button Cordset (M18A)
- * Geriatric Call Button Cordset (M88)
- * Cordset (for combustible applications) (M518X)
- * Call Origination Button (M282)

All call button cordsets (and the call origination button) are compatible with all station types.

Cordsets provide a means of originating a nurse call by the use of a button. There is a rugged call button cordset, a geriatric call button featuring a light pressure switch, and a multi-purpose cordset for use in such situations as oxygen atmospheres.

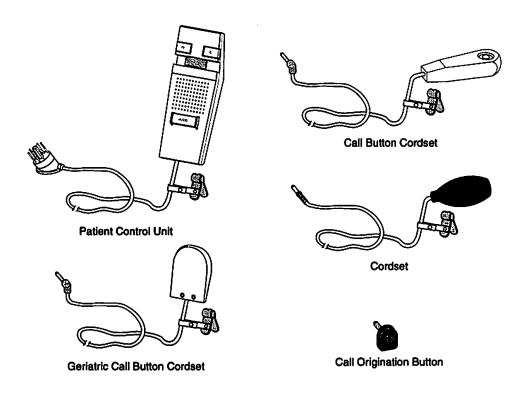


Figure 11. CARE/COM II-E Call Origination Devices

The patient control unit also allows the patient to place a nurse call. In addition to placing a call, the patient control unit also provides control of radio and TV programs and adjusts volume level.

- NOTE
 ☐ The patient control units and most of the cordsets withstand ethylene oxide sterilization procedures.
- Model M18A, M88, and PCU-3 call origination devices are not to be used by patients undergoing oxygen therapy.

Instead of using a call cord, a call origination button is available to allow for placing a call on the patient station itself.

Remember, in the event the call origination device becomes detached from the patient station, or the call origination device becomes damaged (the cord cut), the patient station will originate an emergency or normal patient call. However, this call can only be canceled by re-inserting a properly functioning call device into the patient station.

4.5 Duty/Staff Station

The surface mounted or wall recessed duty/staff station has the facility for call origination, and enables the nursing staff working throughout the facility to be able to communicate with the attendant at the NCS.

As Figure 12 illustrates, the duty/staff station consists of a built-in speaker/microphone, a nurse CALL button and indicator, a red combination call CANCEL button and intercom indicator, and a PATIENT call indicator.

Visual and audio indication of patient calls are provided at each duty/staff station when set for the duty mode. Staff mode stations do not receive indication of patient calls.

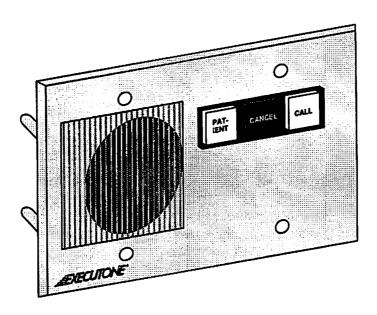


Figure 12. CARE/COM II-E Duty/Staff Station

As the name implies, the station can be used as a duty station, or as a staff station. The mode is selected by setting an internal switch. This means that one station can be used in a variety of situations.

NOTE

One duty/staff station set for duty mode SHOULD be installed in each cable group as well as adjacent to each nurse control station.

4.6 Code Blue and Emergency Stations

Light Dr. 1 February

The code blue station and the emergency station are similar in design, as seen in Figure 13. The emergency station is manufactured with a shower cord, to increase its ease of function in a shower environment. Each unit provides special call origination capabilities. Code blue stations and emergency stations generally connect to a patient or duty/staff station, however these stations can be used as a stand-alone device as well.

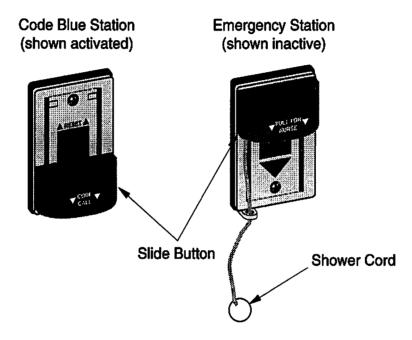


Figure 13. CARE/COM II-E Code Blue and Emergency Stations

4.7 Dome Lamp and Zone Lamp

The multi-sectional dome lamp provides visual signaling that can identify different types of calls through the use of colored lenses, and various lamp indications (steady or flashing).

As seen in Figure 14, each dome lamp consists of four receptacles. The dome lamp mounts on a UL listed metal backbox with a two gang opening.

Typically, the multi-sectional dome lamp is connected to a station in a room and installed just outside that room.

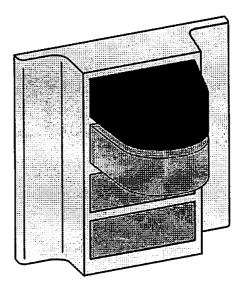


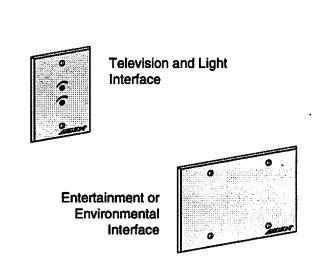
Figure 14. CARE/COM II-E Dome Lamp

To provide visual indications of all calls within a zone, the multi-sectional dome lamp can be used as a zone lamp. The zone lamp provides a separate lamp for code blue, emergency, and routine call indications. The zone lamp connects to a zone control module and terminates at the equipment panel.

4.8 Entertainment and Environmental Interface Units

The wall-recessed or surface mounted entertainment and environmental interface units provide the patient with remote control of a TV, radio and/or other facilities within the room. Using a patient control unit, the patient is able to select TV programs or radio programs as well as activate reading lights, drapes, etc.

These units MUST be used whenever interfacing to any entertainment or



environmental device(s).

Figure 15. CARE/COM II-E Entertainment and Environmental Interfaces

These units are wall-surface or flush-mounted using a UL listed metal backbox with a one or three-gang opening. Each unit connects to the patient station, and then to the entertainment station. The faceplate does not necessarily provide an external hardware connection, as seen in Figure 15.

4.9 Wire and Cable

EXECUTONE Brand cable has been specifically designed for the CARE/COM II-E Nurse Call System to assure optimum operating performance and must be used in all installations. This includes new CARE/COM II-E installations and Care/Com II system upgrades.

Use only the recommended type of "Approved EXECUTONE Brand" wire and cable necessary for the installation. Using the correct wire and cable will ensure proper system performance and increased reliability.

NOTE -

EXECUTONE cannot support or warranty any product/system or its performance if installed using non-approved wire and cable.

4.10 Installation Accessories

Components such as connectors, terminal blocks, plug assemblies and other installation materials are employed throughout the CARE/COM II-E system. These items have been designed to allow the CARE/COM II-E Nurse Call System to operate effectively, efficiently, and reliably.

5. CARE/COM II-E SYSTEM SETUP AND MAINTENANCE

System setup and maintenance needs to be performed by a *qualified* technician. Whether on-site, or off-site, the correct password must be known to access the system.

Once in CARE/COM II-E's system programming, the technician will methodically enter pertinent data on the user-friendly screens. Station groups can be configured into the system with all associated information such as room number, bed number, zone and unit. NCSs can be programmed to operate with various options which optimize its functionality. Other system-wide parameters are set using the screens of the CARE/COM II-E Nurse Call System Main Menu as well.

6. SUMMARY

After reviewing the information in this section, you should be familiar with the advanced healthcare communications features that CARE/COM II-E provides, and the equipment that makes up a CARE/COM II-E Nurse Call System. The next sections detail how to operate the system's components, how to configure a system, how to install the components, how to program (setup) the system, and how to maintain the system. In the last section you can find the index for the entire manual and any product updates that have been filed.

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Section 200 - Operation

1. GENERAL

The CARE/COM® II-E offers the healthcare environment a comprehensive Nurse Call System which is easy to learn and use. When timing can be critical, CARE/COM II-E 's communication system comes through with audible and visual signaling, as well as person-to-person communication; keeping the healthcare staff well informed.

Make sure the hospital staff takes a moment to review the guide to operating the EXECUTONE® CARE/COM II-E system. Also, it may be helpful if they practice a few of the operations to become familiar with the CARE/COM II-E system.

1.1 Powerful, Yet Easy to Use

The CARE/COM II-E system offers many important and convenient features. With these features, CARE/COM II-E will significantly enhance the facility's communications and information networking, while at the same time, provide each patient with amenities such as entertainment and/or environmental control to make their stay more comfortable.

Even though the CARE/COM II-E system is very powerful, it is also easy to use. The menu functions are organized in a logical structure, clearly displayed on the nurse control station. Patient control units are clearly identified for the patient's convenience.

2. BEFORE YOU BEGIN

The CARE/COM II-E Nurse Call System supports central call processing in the healthcare environment. A three-level incoming call structure assures that calls are identified quickly and accurately.

2.1 Comprehensive Call Priorities

The single most important function of a nurse call system is receiving calls from patients. Each call originated has specific audible and visual signaling based on its call level. These call indications are provided on the patient station unit, at the dome lamp, at the duty station(s), and at the nurse control station(s).

The three-level structure ensures accurate call identification, allowing the nursing staff to properly respond to the call. The structure is as follows:

Level 1 Code Blue

A Level 1 call indicates a code blue or life threatening situation (such as cardiac arrest). The call originates via a code blue station associated with a patient station, duty/staff station, or as a stand-alone station. The call can only be canceled by deactivating the code blue station.

Level 4 Emergency

A Level 4 call indicates an emergency. The call originates via an emergency station associated with a patient station, duty/staff station or as a stand-alone station. The call can only be canceled by deactivating or resetting the calling device.

Level 5 Routine Patient/Staff

A Level 5 call indicates a routine or staff call. The call originates via a patient station or duty/staff station.

The call can be canceled at the nurse control station once communication has been established.

A level 4 or 5 Cord Removal call is generated when a patient call device is removed from its receptacle. This "non-cancelable" type call can only be terminated by placing a properly functioning call origination device into the receptacle. A level 5 Cord Removal call also requires pressing the **CANCEL** button at the station.

Table 1. Call Levels/Flash Rate

Call Level	Designation	Flash Rate/Tone Signaling (PPM)		
. 1	Code Blue	120		
4	Emergency	60		
5	Routine	6		
	Patient/Staff			

2.2 Area And Room Assignments to the Nurse Control Stations

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During installation, your CARE/COM II-E system was set up to match your facility's call-handling requirements. Room stations were placed into groups called "station groups". One of CARE/COM II-E's greatest assets is its flexibility in the configuration of station groups. There can be up to 96 functional station groups in one CARE/COM II-E system. All stations groups default to station group 1, station group 1 is available and assigned to NCS01 to insure patient call coverage. A station group could consist of one room, or all the station units in the system. The 96 station groups provide a foundation for countless possibilities, best suited to the functionality of your facility. See Figure 1 which shows a layout of station groups and how they report to nurse control stations.

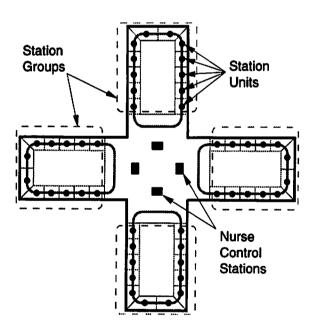


Figure 1. CARE/COM II-E Sample System Layout

The most important thing to remember is that you are able to switch between configurations quickly and easily. See <u>paragraph 3.6</u>, "Call Assignments," for more information on the assignments of station groups.

3. NURSE CONTROL STATION (NCS) OPERATION

The NCS is the primary control point of the CARE/COM II-E Nurse Call System.

Each NCS comes complete with all the displays, controls, and indicators needed to provide as much information as possible, yet is easy to understand and operate. A handset, speaker, and microphone permit nurse-to-patient, nurse-to-nurse, and patient-to-nurse communications, as shown in Figure 2.

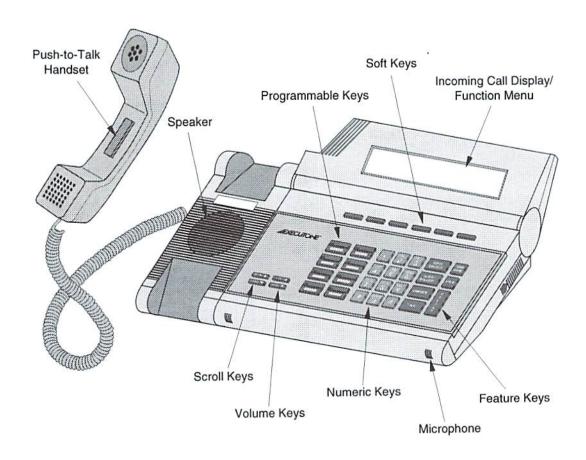


Figure 2. The CARE/COM II-E Nurse Control Station

Informative Display

White The Addition

To quickly and accurately identify incoming calls, the CARE/COM II-E system nurse control station will have the necessary information instantly displayed on the 4 x 40 backlit LCD display.

Up to three incoming calls can be viewed at one time on the *Incoming Call Display/Function Menu*, auto-sorted by level and the time placed. Each incoming call is announced by distinctive rate signaling with the room number, bed number, and the call level (in English*). See <u>Table 1</u> to identify the call level according to the rate signaling.

* Besides being in English, call level nomenclature can be renamed to more accurately identify incoming calls.

Indicators

A Calls Waiting Indicator (identified as a 'C' on the status line) lets the attendant know the number of calls waiting, other than the one call which is active. A Hold indicator will be displayed on the status line (as a 'H'), indicating that calls exist in the hold queue. A 'M' on the status line indicates a call has been tone muted.

Nurse Control Station Components

SCROLL ▲ ▼ keys- These keys are used for scrolling up or down LCD display "screens".

VOL ▲ ▼ keys- These keys are used to adjust the audio of key tones, call tone, and incoming intercom (each controlled separately). Tone volume level ranges from 1 to 7, 1 being the minimum, 7 the maximum.

- (8) Programmable Function Keys- Used to program a specific function.
- (6) Soft keys- Navigate through the layers (first page and second page) in the function menu. The various soft key selections are used as follows:
 - Esc Takes the attendant out of the soft key menu mode and returns back to the display of patient calls.
 - Asgn Allows the attendant to view or change which station groups are assigned/unassigned to this NCS.
 - Ncs Used to place a call to another NCS.
 - **Duty** Used to initiate an Off-Duty function for a NCS.

Page Allows the attendant to page NCSs, zones, page groups, and external

zones.

Mtr Allows the attendant to monitor zones and page groups.

Date Used to change the current date.

Time Used to change the current time.

Priv Currently not used this release.

Serv Currently not used this release.

Prob Generates a problem report indicating battery status and certain

system failures.

STAFF LOCATE key- Currently not used.

NURSE FOLLOW Key- Currently not used.

TALK key- Used as an alternative to the push-to-talk handset. While the **TALK** key is pressed, the LED lights up.

TONE MUTE key- Used to silence the audible signaling of non-cancelable emergency and code blue calls.

HOLD key- Used to place an active call into the hold queue.

RELEASE key- Used to terminate a call connection in progress.

ANSWER key- Used to answer an active incoming call.

Speaker/Microphone- Tone signals alert staff of all system calls. After establishing a voice connection, speak at a normal voice level.

Numeric Keypad

The 12-key numeric dial pad is used for dialing any addressable room/bed numbers. In addition, the numeric keypad may also be used to enter data for various features.

Communications Provisions

A handset allows the attendant to have confidential conversations, or to have conversations at times when using the push-to-talk operation would be impractical.

The speaker provides the audio for both call signaling and handsfree communications. And the microphone, which is separate from the speaker for maximum clarity, is used for voice pickup during push-to-talk and handset communications.

CAUTION

The NCS is designed to function with supplied EXECUTONE handsets only. Substitute handsets are not interchangeable on the CARE/ COM II-E system.

Tone signaling, which serves as a reminder of unanswered calls and calls which exceed the programmable time-out value, continues until the call is answered or canceled.

If you are using the NCS to converse with a patient or staff member, tone signaling is muted. However, the Reminder Tone (if enabled in your facility) will indicate incoming calls. Tone bursts will be heard based on the call level, as seen in Table 2. Call Reminder Tones occur at a 5 second (minimum) interval for level 1 and 4 calls, and at a 20 second interval for level 5 calls.

Table 2. Call Reminder Tones at Nurse Control Station

Number of Tone Bursts
3
2
<u></u>

A Busy Tone is heard when calling another NCS that is in use, or if the audio link to a patient station in a zone is busy.

The Call Announce tone is a splash tone prior to voice connection during NCS to NCS calls, or to alert the patient at a patient station of an audio connection. The Page Beep tone is a programmable splash tone which precedes a page announcement.

Function Menu

The Function Menu is used to access CARE/COM II-E's most frequently used features. This menu consists of multiple display "screens". To access the first screen of the Function Menu, as seen in Figure 3, press the MENU soft key.

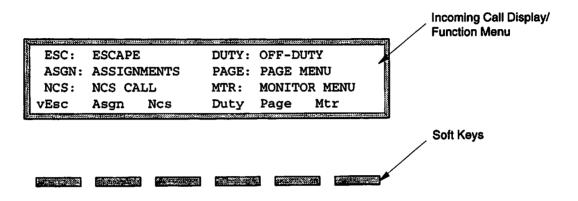


Figure 3. Function Menu - First "Screen"

Use the SCROLL ▼ key to enter the second screen of the menu, as seen in Figure 4. To access a specific feature, press the soft key associated with the feature.

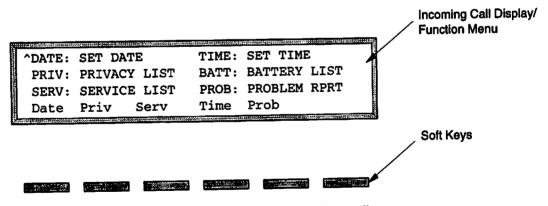


Figure 4. Function Menu - Second "Screen"

The Function Menu's clear and simple prompts guide you through the menu structure. When you select an item on the Function Menu, the system responds by bringing you to the next layer in the menu structure. To exit from the menu, press the RELEASE key.

3.1 Processing Incoming Calls

Calls from patient and duty/staff station are shown in the *Incoming Call Display* by means of an arrow and the room number, bed number (for bed-related calls, if programmed), and call description. Distinctive tone signaling accompanies the display.

The CARE/COM II-E system allows you to answer an incoming call using either push-to-talk operation or the handset.

Push-to-Talk Operation

To answer a call using push-to-talk operation, the attendant has three options:

- Press the ANSWER key, to connect with the first call in queue.
- Press the Direct Station Selection (DSS) key indicating the call you wish to answer. This option allows random selection of calls, other than the first call in queue.
- Dial the room and bed number (in the 3, 4, or 5-digit format previously programmed) of the incoming call as indicated on the *Incoming Call Display* (when multiple calls are displayed).

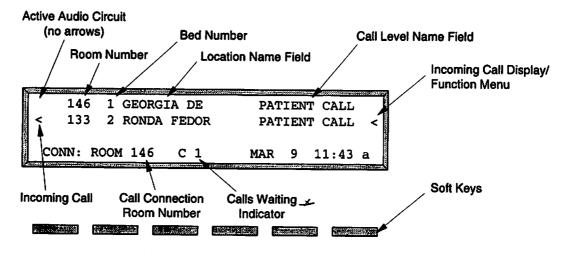


Figure 5. Incoming Call Display

a. Press the TALK key to communicate (in a normal level of speech) with the caller, release the key to listen. The handset may be used for confidential conversations-press the button on the handset to talk, release to listen. A lit LED on the TALK key indicates a busy audio path to the patient.

At any time during a conversation, the attendant can place the call on hold. Placing a call on hold gives the attendant the ability to answer another call, or place a call. See paragraph 3.2. "Placing a Call On Hold", for more information on the hold function.

- b. Press the RELEASE key (or hang up the handset) to terminate the voice connection, or press another DSS key to answer another call.
 - ☐ Pressing the DSS key to answer another incoming call will also terminate the voice connection of a cancelable call.

When terminating the voice connection for a "non-cancelable" emergency or Code Blue call (associated with a patient station) at the nurse control station (NCS), the room and bed number return to their original position relative to the call levels in the *Incoming Call Display*. The tone signaling for the call resumes at the nurse control station unless the Tone Mute feature is used. See <u>paragraph</u> 3.3. "Tone Mute" for more information on the Tone Mute feature.

Code blue and emergency calls can only be canceled at the point of origin. Once a call is canceled, all visual and audible indications associated with that call will cease.

Using the Handset

To answer a call using the handset, when the system is programmed for Automatic Call Answer:

	Pick up	the	handset	to	answer	the	highest	priority	call.
--	---------	-----	---------	----	--------	-----	---------	----------	-------

To answer a call using the handset, when the system is not programmed for Automatic Call Answer:

- ☐ Pick up the handset, press the ANSWER key to answer the highest priority call.
- ☐ Pick up the handset, press the Direct Station Selection (DSS) key indicating the call you wish to answer (if a DSS is attached to the NCS). This option allows random selection of calls, other than the first call in queue.

- Pick up the handset, dial the room and bed number (in the 3, 4, or 5-digit format previously programmed) of the incoming call.
- a. Press the button on the handset to talk in a normal level of speech, release to listen.

At any time during a conversation, the attendant can place the answered call on hold. Placing a call on hold gives the attendant the ability to answer another call, or place a call. See paragraph 3.2, "Placing a Call On Hold", for more information on the hold function.

- b. Press the RELEASE key (or hang up the handset) to terminate the voice connection.
 - Pressing the DSS key to answer another call will also terminate the voice connection of a cancelable call.

3.2 Placing A Call On Hold

You can place an active incoming call on hold at any time. An active incoming call is one that the attendant has answered; the room/bed number appear on the top line of the *Incoming Call Display*. Placing a call on hold permits you to answer other calls or to place calls.

a. Press the HOLD key on the nurse control station (NCS) keypad.

The room and bed number return to their original position relative to the call levels in the *Incoming Call Display*, with a 'H' appearing where the arrow was, as seen in <u>Figure 6</u>. The 'H' lets the attendant keep track of the calls placed on hold. The NCS display will have an indication 'H' on the status line, as well. A maximum of 64 calls (both patient and NCS) can be put on hold at a time within the system. Once the queue is full, the system will not accept another call into hold until a call is released.

After a programmable time-out period, tone signaling for the call resumes at the NCS which originated the hold, and the 'H' is replaced by an arrow.

b. To reconnect with the call, press the **HOLD** key. This will reestablish intercom connection with the station highest in the hold queue (first station to be put on hold). Pressing a Direct Station Selection (DSS) key beside the call indication, or dialing a room and bed number, can be used to specifically reconnect with calls.

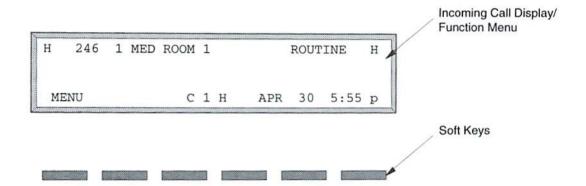


Figure 6. Call On Hold Indicator

c. The attendant terminates the voice connection by pressing the RE-LEASE key, hanging up the handset, or pressing another DSS key.

All calls on hold will recall to the appropriate nurse control stations if not answered within the programmable time limit. The time limit starts when the call is first placed on hold.

3.3 Tone Mute

Tone Mute is used for active calls that you cannot cancel at the nurse control station. Tone Mute allows you to silence the audible signaling that would resume when the voice connection for the call is terminated. (For cancelable calls, such as routine patient calls, Tone Mute works as the **RELEASE** key if the tone mute feature is not enabled during system programming.)

Press the TONE MUTE key.

A 'M' will appear on the fourth line of the *Incoming Call Display*, indicating a call has been tone muted.

3.4 Placing Calls

You can use your nurse control station to place a call (handsfree or push-to-talk) to any patient station or duty/staff station in the CARE/COM II-E system. A call can be placed by either dialing the room and bed number, or using the key on the optional Direct Station Selection (DSS) console.

Dialing the Room and Bed Number

THE PERSON NAMED IN

a. Dial the room and bed number (in 3, 4, or 5-digit format previously programmed).

The dialed digits can be cleared at any time until the call is connected by pressing the **CLR** soft key on the NCS. After the dialing is completed, the system verifies the dialed room and/or bed number. If the room/bed number are correct and assigned to the NCS, the call is made.

- b. Press the TALK key and communicate in a normal level of speech. The handset may be used for confidential conversations. Press the button on the handset to talk, release to listen.
- Press the RELEASE key to terminate voice connection.

Using the Direct Station Selection (DSS) Key

- a. Press the DSS key of the station to be called.
 - The DSS key associated with the dialed room number lights up when the call is connected.
- b. Press the TALK key and communicate in a normal level of speech, release the key to listen. The handset may be used for confidential conversations. Press the button on the handset to talk, release to listen.
- c. Press the RELEASE key to terminate voice connection.

Nurse Control Station (NCS) To NCS Communication 3.5

Unlike patient and duty/staff stations which can be dialed directly, nurse control station (NCS) to NCS communication relies on the Function Menu or the programmable keys for access.

There are three ways to initiate calling a NCS from a NCS; using the soft key on the NCS menu, or, using the programmable key on either the NCS or the Direct Station Selection (DSS) console.

Using the Soft Key

Either handsfree or using the handset:

- a. Press the MENU soft key. First page of the menu will appear.
- b. Press the **NCS** soft key.
- c. At the display ENTER NURSING STATION, enter the number (01 32) of the NCS to be dialed.

The dialed number can be cleared using the CLR soft key anytime before the call connects. To exit from the dialing state altogether, press the ESC soft key or the RELEASE key.

d. If the NCS is not busy, the call is connected.

- NOTE -

If the called NCS is off-duty, the call will be forwarded to the transferred NCS. The display shows CONN: NCS (location name). If the transferred NCS is busy, a busy signal will be heard.

e. When the called NCS connects to the calling NCS, two short beeps are sounded and voice connection is established. At this point both NCSs can talk and listen at the same time.

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When communicating in the push-to-talk mode, the TALK key is used to override speech direction. The NCS which presses the TALK key controls the speech direction, while the key is pressed. Releasing the ${f TALK}$ key allows the other NCS to talk. The LED on the ${f TALK}$ key lights up while it is depressed.

f. Press the RELEASE key or hang up the handset to terminate voice connection and return both NCSs back to the idle state.

Using the Programmable Key
Either handsfree or using the handset:
Press the NCS programmable key designated for NCS to NCS communication.
Press the DSS programmable key designated for NCS to NCS communication.
NOTE
If the NCS or DSS key is programmed to dial a NCS directly, begin with step c.
If the key is programmed to access NCS to NCS communication mode only, begin with step a.
 a. At the display ENTER NURSING STATION, enter the number (01 - 32) of the NCS to be dialed.
The dialed number can be cleared using the CLR soft key anytime before the call connects. To exit from the dialing state altogether, press the ESC soft key or the RELEASE key.
b. If the NCS is not busy, the call is connected. Two short beeps are sounded at the called NCS.
NOTE -
If the called NCS is off-duty, the call will be forwarded to the transferred NCS. The display shows CONN: NCS (location name). If the transferred NCS is busy, a busy signal will be heard.
c. When the called NCS connects to the calling NCS, two short beeps are sounded and voice connection is established. At this point both NCSs

can talk and listen at the same time.

Either NCS can communicate handsfree or using the push-to-talk. The **TALK** key is used to override speech direction. The NCS which presses the **TALK** key controls the speech direction, while the key is pressed. Releasing the **TALK** key allows the other NCS to talk. The LED on the **TALK** key lights up while it is depressed.

d. Press the **RELEASE** key to terminate voice connection and return both NCSs back to the idle state.

3.6 Call Assignments

The call assignments feature makes changing stations groups at a nurse control station as fast and easy as possible. Each NCS within a system may assign or unassign room assignments on a station group basis, providing the NCS maximum efficiency in station coverage.

By default, the system software ensures complete communication in the following ways:

Any call placed from an unassigned patient station will be sent to all NCSs. Any NCS can initiate a call to any patient station in the system. ☐ Calls directed only to a defective or unplugged NCS will be re-routed to all NCSs. Incoming Call Display/ **Function Menu UNASGN GROUP** 1 STATION GROUP 01 2 STATION GROUP 02 **ASGN GROUP** 3 STATION GROUP 03 UNASGN **GROUP** Change Esc PgUp PgDn

Figure 7. Call Assignments Menu

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Soft Keys

To Assign a Station Group

- a. Press the MENU soft key. First screen of the menu will appear.
- b. Press the ASGN soft key.

The station groups which are available to the NCS will be displayed and identified as "UNASGN" (unassigned).

NOTE

If the station group is not displayed on the NCS, the station group is not available to the NCS and must be programmed in the system. Refer to Section 500 or the Programming Guide for more information.

Use the **PgUp** and **PgDn** soft keys to scroll through multiple pages of station groups available to the NCS.

- c. Move the asterisk to the desired Station Group using the SCROLL ▲ and SCROLL ▼ key.
- d. Press the CHANGE soft key for each station group designation you wish to assign to the NCS, as seen in Figure 7.

The station group designation will change from "UNASGN" to "ASGN", indicating that NCS will now receive calls from the station group.

To Unassign a Station Group

- a. Press the MENU soft key. First page of the menu will appear.
- b. Press the ASGN soft key.
- c. Move the asterisk to the desired Station Group using the SCROLL ▲ and SCROLL ▼ key.
- d. Press the CHANGE soft key for each station group designation you wish to unassign. The station group designation will change from "ASGN" to "UNASGN", indicating that the NCS will no longer receive calls from the station group.

Swing Groups

Based on the Call Assignments function, Swing Groups allows the attendant of one nurse control station (NCS) to temporarily transfer the station groups assigned on one NCS to another NCS; ensuring coverage of a NCS which would otherwise be unattended.

The attendant at the NCS where the station groups are being swung to, must first proceed as follows:

- a. Press the MENU soft key. First page of the menu will appear.
- b. Press the ASGN soft key.
- c. Move the asterisk to the desired station group using the SCROLL ▲ and SCROLL ▼ key.
- d. Press the CHANGE soft key.

The station group designation will change from "UNASGN" to "ASGN", indicating that NCS will now receive calls from the station group.

Repeat this procedure for each station group which is being transferred from the other NCS, to ensure each station group is now assigned to the new NCS. Once the NCS in which the station groups are being swung to has assigned all the station groups, then the NCS which will be unassigning the station groups may proceed as follows:

- a. Press the MENU soft key. First page of the menu will appear.
- b. Press the ASGN soft key.

The station groups which are available to the NCS (as defined in the system setup program) will be displayed.

- c. Move the asterisk to the desired station group using the SCROLL ▲ and SCROLL ▼ key.
- d. Press the CHANGE soft key.

The station group designation will change from "ASGN" to "UNASGN", indicating that the NCS will no longer receive calls from the station group.

Performing the Off-Duty function is another way for the NCS to swing *all* its station groups from one NCS to another, and disabling operation at the NCS. See <u>paragraph 3.7. "Off-Duty"</u> for more information on the Off-Duty function.

Share Groups

Another function that can be accomplished using the Call Assignments feature is to Share Groups. CARE/COM II-E allows the station groups assigned to one NCS to be "shared" with another NCS.

The attendant at the NCS which will be sharing the station groups proceeds as follows:

- a. Press the MENU soft key. First page of the menu will appear.
- b. Press the ASGN soft key.
- d. Press the CHANGE soft key.

The station group designation will change from "UNASGN" to "ASGN", indicating that NCS will now receive calls from the station group.

Repeat this procedure for each station group which is being shared with the other NCS, to ensure each station group is now assigned to both NCSs.

Once the NCS has assigned all the station groups it must share, the procedure is complete. The other NCS makes no change to its current status, all station groups remain assigned as previously programmed, but will be monitored by both NCSs.

3.7 Off-Duty

The Off-Duty feature of the CARE/COM II-E system allows a nurse control station to temporarily "close down" operations at one NCS, and transfer its business to another accepting NCS.

Initiate the Off-Duty

There are three ways to initiate the off-duty function; using the soft key on the nurse control station (NCS) menu, or, using the programmable key on either the NCS or the DSS console.

Using the Soft Keys

- a. Press the MENU soft key. First page of the menu will appear.
- b. Press the **DUTY** soft key. "ENTER NURSING STATION" and the **ESC** soft key will display on the NCS.
- c. Using the keypad, enter the number (01 32) of the NCS to be transferred to.

The dialed number can be cleared using the CLR soft key anytime before the call connects. To exit from the dialing state altogether, press the ESC soft key or the RELEASE key.

The NCS which is initiating the off-duty transfer must establish an audio connection with the receiving NCS, so that the called party is aware that an off-duty transfer is about to occur.

- ☐ If the called NCS presses the **RELEASE** key, the off-duty transfer will not complete.
- ☐ If the called NCS presses the ACCEPT soft key, the off-duty transfer is completed.

The called NCS goes back to the idle state. The transferred NCS displays "THIS NCS IS OFF-DUTY" in the *Incoming Call Display*.

Using the Programmable Key

	Press the NCS programmable key designated for Off-Duty.
0	Press the DSS programmable key designated for Off-Duty.
	NOTE S or DSS key is programmed to perform an off-duty to a specific not perform step a.
To progr ming Gu	am the NCS or DSS keys, refer to <u>Section 500</u> or the Programide.

Once the off-duty function has been initiated, proceed as follows:

a. Using the keypad, enter the number (01 -32) of the NCS to be transferred to.

The dialed number can be cleared using the CLR soft key anytime before the call connects. To exit from the dialing state altogether, press the ESC soft key or the RELEASE key.

The NCS which is initiating the off-duty must establish an audio connection with the receiving NCS, so that the called party is aware that an off-duty transfer is about to occur.

- ☐ If the called NCS presses the **RELEASE** key, the off-duty transfer will not complete.
- ☐ If the called NCS presses the ACCEPT soft key, the off-duty transfer is completed.

The called NCS goes back to the idle state. The transferred NCS displays "THIS NCS IS OFF-DUTY" in the *Incoming Call Display*.

Transferred station groups will be indicated by the letter "T" on the left and right columns of each station group line. This procedure of assigning station groups is similar to performing the Swing Groups function. However, the swing groups function can select individual station groups rather than all the station groups assigned to the NCS, and does not shut down NCS operation. See <u>paragraph 3.6</u>, "Call Assignments" for more information on the Swing Groups function.

To Cancel an Off-Duty Transfer

a. Press the CANCEL soft key at the Off-Duty NCS to connect with the forwarded NCS.

If the forwarded NCS in the meanwhile was transferred to another NCS, the call goes on to the final destination NCS. (The maximum number of cascaded transfers is 4).

b. Press the RELEASE soft key at the called NCS.

All the station groups that were transferred are returned back to the originating NCS. Any active calls on the NCS (that belong to the NCS that is coming out of off-duty) are signaled.

3.8 Voice Page

CARE/COM II-E offers four different paging options, which allows the attendant to conveniently and efficiently make a broadcast announcement. These options include paging all nurse control stations (NCSs), paging a zone, paging a group, and paging an external zone.

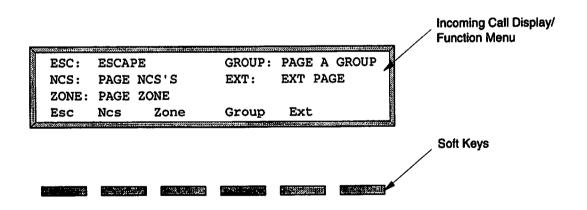


Figure 8. Page Menu

Page all Nurse Control Stations (NCSs)

There are three ways to initiate the paging function to all NCSs: using the soft keys on the NCS menu, or, using the programmable key on either the NCS or the DSS console.

Using the Soft Keys

- a. Press the MENU soft key. First page of the menu will appear.
- b. Press the PAGE soft key. The NCS will display the Page menu, as seen in Figure 8.
- c. Press the NCS soft key. "Page: all NCSs" will display on the last line of the active NCS display.

The location name of the NCS which is paging, MENU and ANS soft keys, and the date and time will appear on the fourth line of the connected NCSs.

NOTE —
It is not necessary to press the TALK key or use the push-to-talk hand-
set to make an announcement.

d. The attendant makes the announcement to all NCSs.

- e. Any responding NCS can conduct a two-way conversation with the paging NCS by pressing the ANS key on the NCS. The display of each NCS will show "CONN:" and the location name of the other NCS. Two-way conversation is now possible.
 - ☐ To conduct one-way conversation, press the TALK key to communicate, and release to listen. The TALK key LED will light, indicating who is to talk.
- f. When finished making the announcement, press the **RELEASE** key or hang up the handset to clear audio connection and return the NCSs to their idle state.

NOTE .

The amount of time available for announcements is based on the "Timeout Page Setting" which is programmed during system setup.

Using the	Programma	ble Key
-----------	-----------	---------

	Press the NCS programmable key designated for "Page all NCSs." The NCS will display "Paging all NCSs" on the last line of the display.
	Press the DSS programmable key designated for "Page all NCSs". The NCS will display "Paging all NCSs" on the last line of the display.
	The location name of the NCS which is paging, MENU and ANS soft keys, and the date and time will appear on the fourth line of the connected NCSs.
Once th	e paging function has been initiated, proceed as follows:
a.	The attendant makes the announcement to all NCSs.
	NOTE -
	t necessary to press the TALK key or use the push-to-talk handset e an announcement.
b.	Any responding NCS can conduct a two-way conversation with the paging NCS by pressing the ANS key on the NCS. The display of each NCS will show "CONN:" and the location name of the other NCS. Two-way conversation is now possible.
	To conduct one-way conversation, press the TALK key to communicate, and release to listen. The TALK key LED will light, indicating who is to talk.
c.	When finished making the announcement, press the RELEASE key or hang up the handset to clear audio connection and return the NCSs to their idle state.
	NOTE -
	nount of time available for announcements is based on the "Timege Setting" which is programmed during system setup.

Page a Zone

In the CARE/COM II-E system a page zone consists of twelve (stations) units.

There are three ways to initiate the paging function to a zone: using the soft keys on the nurse control station (NCS) menu, or, using the programmable key on either the NCS or the DSS console.

Using the Soft Keys

- a. Press the MENU soft key. First page of the menu will appear.
- b. Press the PAGE soft key. The NCS will display the Page menu.
- c. Press the **ZONE** soft key. "ENTER ZONE" and the **ESC** soft key will display on the NCS.
- d. Using the keypad, dial the number (01 64) of the zone to page. After approximately three seconds, "PAGE ZONE #" will appear on the display.
- e. The attendant makes the announcement to all NCSs.

It is not necessary to press the TALK key or use the push-to-talk handset to make an announcement.

f. When finished making the announcement, press the **RELEASE** key or hang up the handset to clear audio connection and return the NCS to its idle state.

Using the Programmable Key

- Press the NCS programmable key designated for the specific Page Zone number.
- ☐ Press the DSS programmable key designated for the specific Page Zone number.
- a. "PAGE: ZONE #" will appear on the NCS display.

b. The attendant makes the announcement to all NCSs.		
It is not necessary to press the TALK key or use the push-to-talk hand-set to make an announcement.		
c. When finished making the announcement, press the RELEASE key or hang up the handset to clear audio connection and return the NCS to its idle state.		
Page a Page Group		
A page group is composed of the zones and external zones determined during system programming to be inclusive.		
There are three ways to initiate the paging function to a page group: using the soft keys on the nurse control station (NCS) menu, or, using the programmable key on either the NCS or the Direct Station Selection (DSS) console.		
Using the Soft Keys		
a. Press the MENU soft key. First page of the menu will appear.		
b. Press the PAGE soft key. The NCS will display the Page menu.		
 Press the GROUP soft key. "ENTER PAGE GROUP" and the ESC soft key will display on the NCS. 		
 d. Using the keypad, dial the number (01 - 64) of the page group to page. "PAGE:" and the name given to the page group will appear on the display. 		
e. The attendant makes the announcement to the zones and external zones in the page group.		
NOTE -		
It is not necessary to press the TALK key or use the push-to-talk hand- set to make an announcement.		

f. When finished making the announcement, press the **RELEASE** key or hang up the handset to clear audio connection and return the NCS to its

idle state.

Using the Programmable Key

- ☐ Press the NCS programmable key designated for the specific Page Group number.
- Press the DSS programmable key designated for the specific Page Group number.
- a. "PAGE:" and the name given to the page group will appear on the display.
- b. Make the announcement to the zones and external zones in the page group.

- NOTE -

It is not necessary to press the **TALK** key or use the push-to-talk handset to make an announcement.

c. When finished making the announcement, press the **RELEASE** key or hang up the handset to clear audio connection and return the NCS to its idle state.

Page an External Page Zone

There are three ways to initiate the paging function to an external page zone: using the soft keys on the nurse control station (NCS) menu, or, using the programmable key on either the NCS or the DSS console.

Using the Soft Keys

- a. Press the MENU soft key. First page of the menu will appear.
- b. Press the PAGE soft key. The NCS will display the Page menu.
- c. Press the EXT soft key. "ENTER EXT ZONE" and the ESC soft key will display on the NCS.
- d. Using the keypad, dial the number (01 04) of the external zone to page. After approximately three seconds, "PAGE: EXT ZONE #" will appear on the display.

e. Make the announcement to the external zone. NOTE It is not necessary to press the TALK key or use the push-to-talk handset to make an announcement.	
f.	When finished making the announcement, press the RELEASE key or hang up the handset to clear audio connection and return the NCS to its idle state.
Using	the Programmable Keys
C	Press the NCS programmable key designated for the specific Page Ext Zone number.
	Press the DSS programmable key designated for the specific Page Ext Zone number.
a.	"PAGE: EXT ZONE #" will appear on the NCS display
b.	Make the announcement to the external zone.
set to	NOTE It necessary to press the TALK key or use the push-to-talk hand- make an announcement. When finished making the announcement, press the RELEASE key or
c.	When finished making the announcement, press the RELEASE key or hang up the handset to clear audio connection and return the NCS to its idle state.

3.9 Monitoring

When the attendant needs to check up on the well being of their patients without leaving the nurse control station (NCS), CARE/COM II-E 's monitoring function responds quickly and efficiently. As Figure 9 illustrates, CARE/COM II-E offers two monitoring options; monitoring a zone and a page group.

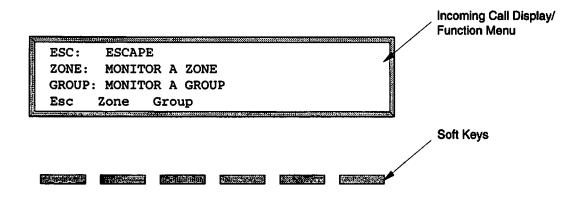


Figure 9. Monitor Menu

Monitor a Zone

There are three ways to initiate the monitoring function of a zone: using the soft keys on the nurse control station (NCS) menu, or, using the programmable key on either the NCS or the DSS console.

Using the Soft Keys

- a. Press the MENU soft key. First page of the menu will appear.
- b. Press the MTR soft key. The NCS will display the monitor menu.
- c. Press the **ZONE** soft key. "ENTER ZONE" and the **ESC** soft key will display on the NCS.
- d. Using the keypad, dial the number (01 64) of the zone to monitor. After approximately three seconds, "MONTR ZONE #" will appear on the display.

Using the handset, or monitoring handsfree, audio from all the patient stations in the zone will be heard at the NCS.

e. When finished monitoring, press the RELEASE key or hang up the handset to clear audio connection and return the NCS to its idle state.

Using the Programmable Key

- ☐ Press the NCS programmable key designated for the specific Monitor Zone number.
- Press the DSS programmable key designated for the specific Monitor Zone number.
- a. "MTR: ZONE #" will appear on the NCS display.

Using the handset, or monitoring handsfree, audio from all the patient stations in the zone will be heard at the NCS.

b. When finished monitoring, press the **RELEASE** key or hang up the handset to clear audio connection and return the NCS to its idle state.

Monitor a Page Group

There are three ways to initiate the monitoring function to a page group: using the soft keys on the nurse control station (NCS) menu, or, using the programmable key on either the NCS or the DSS console.

Using the Soft Keys

- a. Press the MENU soft key. First page of the menu will appear.
- b. Press the MTR soft key. The NCS will display the monitor menu.
- c. Press the **GROUP** soft key. "ENTER PAGE GROUP" and the **ESC** soft key will display on the NCS.
- d. Using the keypad, dial the number (01 64) of the page group to monitor. After approximately three seconds, "MTR:" and the name given to the page group will appear next on the display.

Using the handset, or monitoring handsfree; audio from all patient stations in the page group will be heard at the NCS.

e. When finished monitoring, press the **RELEASE** key or hang up the handset to clear audio connection and return the NCS to its idle state.

Using the Programmable Keys

- Press the NCS programmable key designated for the specific Monitor Group number.
- Press the DSS programmable key designated for the specific Monitor Group number.
- a. "MTR:" and the name given to the page group will appear on the display.

Using the handset, or monitoring handsfree; audio from all patient stations in the page group will be heard at the NCS.

b. When finished monitoring, press the **RELEASE** key or hang up the handset to clear audio connection and return the NCS to its idle state.

3.10 Changing the Time/Date

You can set the current time and date, which are displayed on your NCS. (Note that the format in which the time and date display on the NCS is defined during system setup).

To Change the System Time

- a. Press the MENU soft key. The first page of the menu will appear.
- b. Using the SCROLL ▼ key, scroll down to the next page of the menu.
- c. Press the TIME soft key.

The following message is displayed on the nurse control station (NCS):

THIS WILL CHANGE THE SYSTEM TIME!!!
ENTER TIME IN 24 HOURS FORMAT

	— NOTE —
	ing the time on one NCS changes the system time and is reflected the NCSs.
d.	Enter the hour digits. Two digits are required; the system verifies the hours to be between 00 and 23.
e.	Enter the minute digits. Two digits are required; the system verifies the minutes to be between 00 and 59.
f.	Press the ENTER soft key. The new setting is entered in the system memory.
	Display of time in 12 hour format:
	12:00 am to 12:00 pm hours
	Display of time in 24 hour format:
	00:00 to 23:59 hours
	me is always entered in 24 hour format, but will display according to stion previously programmed in the system.
To C	hange the System Date
a.	Press the MENU soft key. The first page of the menu comes up.
b.	Using the SCROLL ▼ key, scroll down to the next page of the menu.
c.	Press the DATE soft key. The following message is displayed on the nurse control station (NCS):
	THIS WILL CHANGE THE SYSTEM DATE!!! ***ENTER DATE IN MM - DD FORMAT***
	MATE
	NOTE
	ging the date on one NCS changes the system date and is reflected the NCSs.

- d. Enter the month digits. Two digits are required; the system verifies the month to be from 01 to 12.
- e. Enter the day digits. Two digits are required; the system verifies the day to be from 01 to 31.
- f. Press the ENTER soft key. The new setting is entered in the system memory.

3.11 Problem Report

numbered zone is also included.

The Problem Report identifies any current source(s) of trouble within the CARE/COM II-E system hardware. If a zone or flasher card failure occurs, or the system power is transferred from main power to alternate power source, a SERVICE indicator will appear on the NCS. To access the service information:

a. Press the soft key associated with the SERVICE! message.		
The first page of the problem report appears.		
b. Use the SCROLL keys to maneuver through the pages of the problem report list.		
☐ Page 1 indicates ZONES CURRENTLY ON BATTERY (In numbered zones)	sts odd-	
☐ Page 2 indicates ZONE FAILURES (lists odd-numbered zo	nes)	
Page 3 indicates FLASHER CARD FAILURES (lists odd- zones associated with the failed flasher card)	numbered	
□ Page 4 indicates HCP BATTERY STATUS		
NOTE -	 	
Although an odd-numbered zone is identified, the following	even-	

Battery status identifies both Main Control Unit and Expansion Unit

battery.

c. When finished viewing the Problem Report, from any of the four pages, press the ESC key and return the NCS to its idle state.

To access the SERVICE information from the *Incoming Call Display/Function Menu*, proceed as follows:

- a. Press the MENU soft key. The first page of the menu comes up.
- b. Using the SCROLL ▼ key, scroll down to the next page of the menu.
- c. Press the **PROB** soft key. The first page of the Problem Report is displayed on the nurse control station (NCS).

The Problem Report is a multi-page menu. Use the SCROLL keys to maneuver through the problem report list.

d. When finished viewing the Problem Report, from any of the four pages, press the ESC key and return the NCS to its idle state.

Note that if the intercom path is idle, you can mute the tone signaling associated with service indications by pressing the **TONE MUTE** key when viewing the problem report. This will mute the tone signaling associated with the most current service indication(s) at all nurse control stations and duty stations. Any new problems that occur will cause the service tones to return.

NOTE -
f a problem does occur, contact your authorized EXECUTONE service epresentative.
epieseiliauve.

3.12 NCS Self-Test

The self-test mode of the nurse control station allows the user to make sure each key is functioning properly. A DSS console which is "attached" to the NCS being tested, may be tested as well. To use the self-test:

a. Lift the handset. Internal dial tone is heard.

NOTE -
The hands-free mode cannot be used to perform a self-test.
The final to those darket be determined by the first by t

b. Dial 7#. The NCS is placed in the test mode.

<< Keyboard/LED Test >> will appear on the first line of the Incoming Call Display/Function Menu.			
Ç	Source: Code: Key:	Indicates the NCS being tested. Provides no information pertinent to the tester. Corresponds to the key pressed.	
c.	c. Press each of the programmable keys.		
	key inform	de/sub-key code of the programmable key will appear in the ation. The fourth line of the <i>Incoming Call Display/Function</i> ides a help section which defines the function of the key code/de.	
d.	Press each	digit on the dial pad.	
	The key wi	Ill be identified.	
e.	Press each of the feature keys.		
	The key wi	Il be identified.	
f.	Press each	of the soft keys.	
	The key wi	Il be identified.	
g.	Press each	of the SCROLL and VOLUME keys.	
	The key will be identified.		

h. When the test is completed, return the handset on-hook.

Direct Station Selection (DSS) Console

The CARE/COM II-E DSS console works in conjunction with the nurse control station (NCS) to quickly and efficiently process intercom calls, and provide yet another visual indication of calls and call levels.

As seen in Figure 10, there are 48 programmable keys and LED indicators on each DSS console to provide maximum efficiency of the NCS system. Each NCS can support a maximum of two consoles. LED signals provide call priority indication as follows:

- 1. Steady- Routine Patient/Staff Call (Level 5)
- 2. Slow Flash- Emergency Call (Level 4)
- 3. Fast Flash- Code Blue Call (Level 1)

A LED light which is on steady indicates a connected audio path. A flickering LED indicates a call on hold associated with the DSS key.

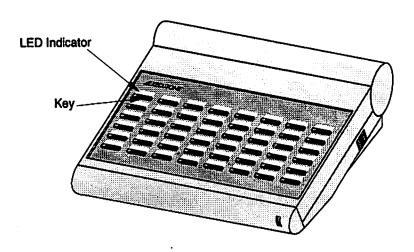


Figure 10. Direct Station Selection (DSS) Console

For specific information on programming the Direct Station Selection keys, refer to Section 500 or the Programming Guide.

4. PATIENT STATION OPERATION

CARE/COM II-E patient stations provide interface between the patient and the nursing staff at your nurse control station(s). Furthermore, each patient station can accept input from peripheral devices such as code blue stations, emergency stations, and call origination devices. Features available to a patient and/or staff include:

* Placing and Canceling Calls

Code Blue Call (Level 1)
Emergency Call (Level 4)
Routine Patient/Staff Call (Level 5)

Cord Removal Call (Level 4 or 5, as programmed)**

* Receiving Calls

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- **★** Entertainment/Environmental Capabilities***
- ** A Cord Removal Call identifies a situation where a call device is not plugged into its receptacle or has a damaged cord; it is not used by the patient.
- *** Available with certain equipment.

Code Blue, Emergency, and Cord Removal calls are considered "non-cancelable" calls; they can only be canceled at the point of origin.

Each CARE/COM II-E single and dual patient station has the same basic elements.

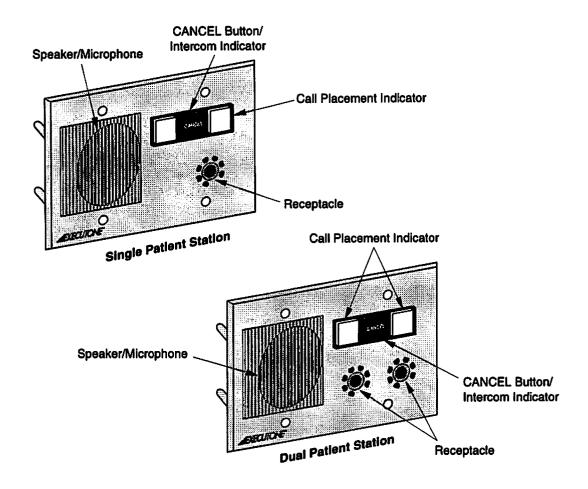


Figure 11. CARE/COM II-E Patient Stations

Patient station controls and indicators are well marked and conveniently located, as shown in Figure 11. Common to both stations are:

- * Call Placement Indicator
- * CANCEL Button/Intercom Indicator
- * Receptacle
- * Speaker/Microphone

Call Placement Indicator	Illuminates at the patient station when a routine patient call has been activated.
CANCEL Button/ Intercom Indicator	Allows a patient or staff to cancel a call prior to voice connection with the NCS. This indicator (red) illuminates steadily when the NCS establishes a voice connection with the patient station.

Receptacle for
Call Origination
Device

Microphone

Each receptacle accepts a call origination device. A dual patient station accepts two call devices.

When the patient replies to the NCS attendant, the microphone picks up the patient's voice. (Note that the patient *does not* have to raise his or her voice or speak in the direction of the microphone.) The microphone also enables the nurse at the NCS to

monitor the room.

Speaker The patient uses the speaker to listen to the attendant at the nurse control station during a call or a page.

4.1 Placing And Canceling Calls

CARE/COM II-E patient stations are designed for easy operation, no matter which call origination device is used. To place a call using the call origination device, proceed as follows:

a. Press the NURSE call button on the cordset, call origination button, or patient control unit connected to the patient station.

Placing a routine patient call performs several functions:

0	The white Call Placement Indicator on the patient station illuminates.
	The corridor dome lamp and associated zone lamps illuminate.
	The call is displayed on the Incoming Call Display on the NCS.

b. To cancel the call, press the combination red CANCEL button and intercom indicator.

Once the nurse control station establishes voice contact with the patient through the patient station, the call can only be canceled at the nurse control station.

Removing the call origination device also originates a Level 4 or 5 programmable call. To place and cancel a call by removing the call origination device, proceed as follows:

- a. Pull the cordset, patient control unit, or call origination button out of the patient station receptacle.
- b. To cancel the Level 4 or 5 Cord Removal call, a properly functioning cordset, patient control unit, or call origination button must be reinserted into the patient station.
 - For Level 5 Cord Removal Calls, press the CANCEL button/intercom indicator on the patient station once a properly functioning cordset has been reinserted.

NOTE -

When a call origination device is removed, a non-cancelable type of patient call is generated. This call cannot be canceled at the NCS or by pressing the **CANCEL** button on the patient station. It can only be canceled by inserting a properly functioning device into the receptacle on the patient station.

Placing Two Calls From a Dual Patient Station

A dual patient station provides two-way communications for each of two separate individuals occupying the same room. The procedure for originating calls from a dual patient station is the same as for a single patient station. The exception is that two patients can originate calls to the nurse control station individually by pressing their own NURSE call button. However, the call is associated with a room only, not with two separate beds.

4.2 Receiving Calls

A call to a CARE/COM II-E patient station is signaled by the red call CANCEL button/intercom indicator illuminating and the attendant's voice through the patient station or patient control unit speaker.

- a. To converse, the patient simply replies; no operation of controls is required.
- b. To terminate the conversation, the attendant at the nurse control station presses the **RELEASE** key, hangs up the handset, or answers another call.

4.3 Entertainment/Environmental Capabilities

CARE/COM II-E patient stations enable the patient to control certain entertainment and environmental features through the use of a patient control unit. The patient stations even have entertainment audio muting during intercom so the patient can hear the nurse at the NCS. The patient control unit is connected to the receptacle on the patient station. See <u>paragraph 5.2 "Remote Control of Entertainment and Environmental Facilities (PCU Only)"</u> for information on using the patient control unit to control entertainment and environmental facilities.

5. CALL ORIGINATION DEVICE OPERATION

CARE/COM II-E offers a variety of call origination devices that enable the patient to place a call to the nurse. Patient control units provide for call origination as well as giving the patient control of entertainment and environmental facilities, as seen in Figure 12. Other types of call cords provide call origination capability only.

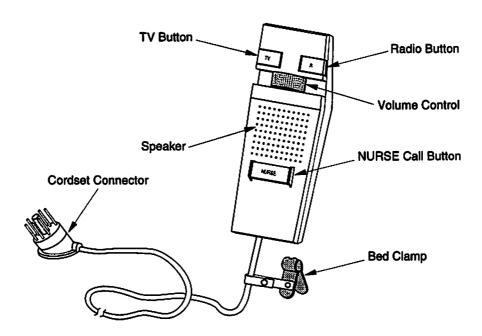


Figure 12. Patient Control Unit

The patient control unit (PCU) and the call cord have the following features:

NURSE Call Button	This button is used by the patient to originate a call.
Bed Clamp	The bed clamp secures the call device's cord to a bed cover or sheet.
Cordset	Plug this connector into the receptacle on a patient station.

The patient control unit (PCU) also has the following:

Radio Buttons The radio button is used to turn the radio on and off

and select radio stations.

TV Button The TV button is used to turn the TV on and off and select

TV channels.

Pillow Speaker Depending on system setup radio and TV sound can be

heard through the patient control unit's pillow speaker. In addition, the pillow speaker can be used for *incoming* audio

during intercom between the nurse and patient.

Volume Control Slide the patient control unit's volume control up to increase

radio or TV sound, and down to decrease sound.

5.1 Call Origination and Cancellation

The patient presses the NURSE button on the call cord or patient control unit to place a Level 5 call. The call can be canceled using the CANCEL button, unless voice connection has been established; in which the call will be terminated at the nurse control station.

If a call device is removed from its receptacle, a Level 4 or 5 call (as programmed) is also generated. Replace the call device in its receptacle to cancel the call. For Level 5 Cord Removal Call, press the CANCEL button/intercom indicator on the patient station once a properly functioning cordset has been reinserted.

5.2 Remote Control of Entertainment and Environmental Facilities (PCU Only)

The patient control unit's feature buttons enable the patient to control entertainment and environmental facilities.

TV Channel Selection

- a. Turn on the TV by pressing the TV button.
- b. Press and release the TV button until the desired channel is reached.
- c. Adjust the volume to a comfortable level using the volume control.
- d. To turn the TV off, press and release the TV button until the TV turns off.

Radio Station Selection

- a. Turn on the radio by pressing the Radio button.
- b. Press and release the Radio button until the desired station is reached.
- c. Adjust the volume to a comfortable level using the volume control.
- d. To turn the radio off or return to TV audio, press and release the Radio button until the radio turns off or until the TV audio is heard.

6. DUTY/STAFF STATION OPERATION

CARE/COM II-E duty/staff stations provide the interface between your healthcare staff at various locations throughout the facility and your attendant at the nurse control station(s). System setup determines whether the station operates as a duty station or a staff station.

Both duty and staff stations provide for communications to the NCS attendant. A duty station also provides incoming call indications with visual and audio signaling of patient calls placed within the associated zone.

Duty/staff station controls and indicators are well marked and easy to operate, as Figure 13 illustrates. Each duty/staff station has:

- * CALL placement button and indicator
- * Call CANCEL button and intercom indicator (red)
- * PATIENT call indicator
- * Speaker
- * Microphone

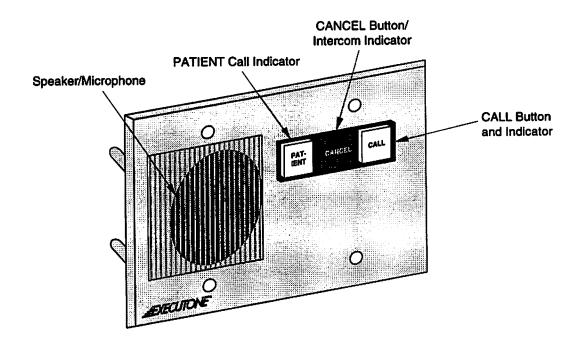


Figure 13. CARE/COM II-E Duty/Staff Station

Button and

Indicator

Indicator

CALL Placement This button is used to originate a Level 5 Routine Patient/ Staff call. Illuminates to verify a call has been placed.

Call CANCEL **Rutton** and Intercom

This button is used to terminate a call originated by the duty/staff station, removing the call indication from the NCS. The red indicator illuminates when a voice connection has been established with the NCS, extinguishes when

conversation is canceled.

PATIENT Call Indicator

This indicator illuminates (when in duty mode) to alert staff that a call has been placed to the NCS within the associated zone. Visual and audible tone signaling alerts staff to the level of the call placed.

Placing And Canceling Calls 6.1

Press the combination CALL Button and Indicator.

When the attendant at the nurse control station responds, converse in a normal level of speech.

b. To terminate the conversation, press the RELEASE key at the nurse control station. The red intercom indicator will extinguish, verifying the call is canceled.

NOTE

Once voice connection is established, the call can only be canceled by the NCS.

> If voice connection was not established, press the CANCEL button to terminate call indications.

Should a patient or staff call be originated within the same zone as the duty/staff station while the conversation is in progress, the white PATIENT Call Indicator illuminates, but no tone signal is heard.

6.2 Receiving Calls

Living of English

When a call is placed to a CARE/COM II-E system duty/staff station, the red Intercom Indicator illuminates and the attendant's voice is heard through the duty/staff station speaker.

- a. To converse, simply reply; no operation of controls is required.
- b. To terminate the conversation, press the **RELEASE** key at the nurse control station. The red intercom indicator will extinguish, verifying the call as canceled.

NOTE	
NOIE	
Once voice connection is established, the call can only be canceled by	
the NCS.	

c. If voice connection was not established, press the CANCEL button to terminate call indications.

Should a patient or staff call be originated within the same zone as the duty/staff station while the conversation is in progress, the white **PATIENT** Call Indicator illuminates, but no tone signal is heard.

6.3 Responding To Visual And Audible Call Indications

When the station is set in the duty mode:

- a. Observe the **PATIENT** Call Indicator flashing rate and audible tones to determine the type of call.
- b. Note the corridor dome lamps in the zone to see which one is illuminated and go to that patients room to render assistance.
- c. After rendering assistance, press the CANCEL button on the station unit. Remember, once voice connection is established with the NCS, only the NCS can terminate connection.

Code blue and emergency calls must be canceled at the point of origin, by re-setting the emergency switch. This will then cause all indications of the call to terminate.

7. CODE BLUE STATION AND EMERGENCY STATION OPERATION

The CARE/COM II-E system's code blue stations and emergency stations are similar in design and operation. They are both simple to use in a wet or dry environment. The code blue station is used by the attending staff for high priority emergencies such as cardiac arrest, while the emergency station is used by the hospital staff and/or the patients for other emergency situations. To comply with UL waterproof requirements, each station must be flush-mounted on a flat, non-tiled surface in accordance with installation instructions. Figure 14 shows what the code blue and emergency stations look like.

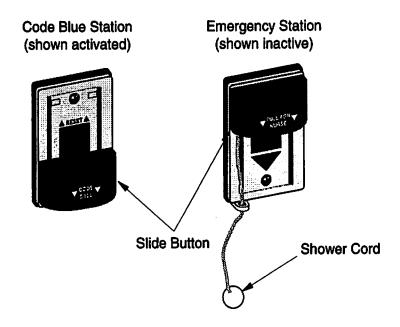


Figure 14. CARE/COM II-E Code Blue Station and Emergency Station

The emergency station is manufactured with a shower cord attached, to facilitate its function in a shower/bath environment. The shower cord can be removed if the emergency station is installed in an easily accessible, dry environment.

The slide button/lens on the code blue station is blue, and the slide/button lens on the emergency station is red.

7.1 Originating A Call

a. Activate the station by pushing down the slide button. For code blue stations, a Code Blue call (level 1) is originated. For emergency stations, an Emergency call (level 4) is originated.

To activate an emergency station which has a pull cord attached, simply pull the cord. This action causes the slide button to be pulled down, activating the switch.

Both level 1 and level 4 calls are accompanied by audible and visual tone signaling at the nurse control station and the duty/staff stations, with visual signaling as well via the dome lamp. Tone signaling continues until the call is canceled at the point of origin.

7.2 Canceling A Call

a. Cancel code blue and emergency station calls by pushing the slide button back up into its set position.

When the call is canceled, all indications cease.

Section 250 - Pocket Page Operation

1. GENERAL

Pocket paging allows for versatile and expanded call coverage. With pocket page integration, the facility staff can wear pagers (beepers) to inform them of calls placed in the CARE/COM® II-E system. A maximum of 122 pagers can be used in the system. Alphanumeric pagers can receive and display up to 192 messages, pre-programmed and specific to your facility.

Pocket page setup is flexible and specific. Healthcare personnel are assigned a staff ID to be used for assigning patients to a staff member as well as for assigning a pager to a staff member.

1.1 Manual Mode vs. Automatic Mode

CARE/COM II-E provides two modes of pocket page operation:

- ☐ In "Automatic Mode," all staff members assigned as primary careproviders for a room will be paged when a call is placed from that room.
- In "Manual Mode," attendants at the nurse control station may manually generate a page to a staff member assigned to cover a room, or any staff member.

In either mode of operation, a page can be generated at any time from the NCS.

Automatic Mode

In automatic mode, when a call is placed from a patient station, all staff members assigned as primary responders for that room will be paged, providing they are configured to receive calls of that priority level.

If the primary staff selected do not respond within the Room Coverage Timeout period determined in system programming, the secondary and primary responding groups will be paged. If neither respond, a third responding group assigned to that station will be paged. Paging will continue for all three groups until the call is canceled or answered at an NCS.

Manual Mode

In manual mode, when the pocket page key is pressed at the NCS, the staff member can select Staff ID page based on Class or a specific staff member. When the SEND soft key is pressed, the page is sent.

1.2 Pager Types

Pocket paging works with several types of pagers (beepers). CARE/COM II-E takes advantage of these various types by sending as much information as possible about a call to the pocket page system for display on the pagers.

Alphanumeric Pager - This type of pager indicates a call by a tone or other method. In addition, an alphanumeric pager can display the room number, bed number, call type, and a 16-character message in manual mode, or 16-character patient name in automatic mode.

Numeric Pager - This type of pager indicates a call by a tone or other method. In addition, a numeric pager can display the room number, bed number, call type, and message type in manual mode.

Tone Pager - This type of pager indicates a call by a tone or other method. No display is provided.

1.3 Message Display

In automatic mode, alphanumeric pagers will display the call level text, room number, bed number and patient name. Numeric pagers will display the call level number, as well as room and bed number.

In manual mode, the same information will be displayed. Alphanumeric pagers also display a pre-programmed message.

2. OPERATION

In order for CARE/COM II-E to operate with a pocket page system, the following items must be set up in system programming:

- ☐ Staff ID, staff name, class, pager identification number and pager type must be determined
- ☐ Room and bed assignments to the staff members
- ☐ Pager assignments to the staff members
- Pager assignments and station groups in priority pocket page

At the nurse control station (NCS), this function must be accomplished:

Pocket paging mode determined (automatic, manual (the default setting), or off)

2.1 Nurse Control Station Operation

At an idle NCS, the pocket paging configuration will be displayed (Ppg: Aut, Man, Off or Bad). If the pocket pager is not connected (no serial port has been configured to the Pocket Pager hardware type), the ppg label or status will not be displayed. The pocket page modes are identified as one of the following:

aut indicates pocket pager in automatic mode
man indicates pocket pager in manual mode
OFF indicates the pocket pager is connected but turned off in the system
BAD indicates polling of the pocket pager hardware has no response*

* The hardware failure of the pocket pager system will create a SERVICE! indication.

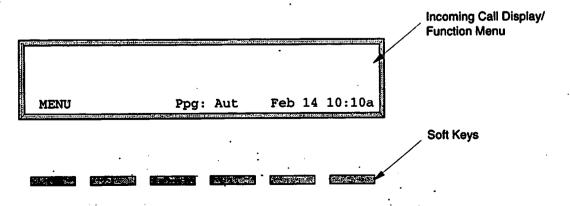


Figure 1. Pocket Page Indication at an Idle Nurse Control Station

Changing Pager Configuration

To change the pocket page mode for the NCS from the Function Menu, proceed as follows:

- a. Press the MENU soft key.
- b. Using the SCROLL ▼ key, enter the second page of the menu.
- c. Press the PPG soft key.

The password screen appears.

- d. At the "ENTER PASSWORD" prompt, enter the 6-digit password determined in the *Pocket Pager Configuration* screen.
- e. If the password is correct, the prompt "SELECT POCKET PAGER MODE" appears. Press the soft key associated with the mode to be selected:

Off	Shuts down the pocket page option in the system
Auto	NCS will operate in automatic pocket page mode
Man	NCS will operate in manual pocket page mode
Esc	Exits pocket pager mode with no change

When the pager mode has been selected, the display will return to the idle state.

2.2 Performing a Manual Page

To perform a manual pocket page from an idle NCS, proceed as follows:

a. Press the programmable key for pocket page.

NOTE -		
NOTE		
There are three options of programming a key for pocket page: a key to		
initiate the pocket page menu, a key to page a specific staff member, or a		
key which repeats the last page. The appropriate key(s), located on the		
NCS or DSS console, are determined in system programming.		
•		

If the programmable key selected is to page a specific staff member, no other action is necessary.

If the programmable key selected is to repeat the last page, proceed to step d. If the programmable key selected initiates the pocket page menu, proceed as follows:

- b. At the prompt "ENTER STAFF ID OR PRESS SOFT KEY," perform one of the following options:
- ☐ Enter the three digit (001 366) staff identification number.

NOTE

If less than three digits are dialed when entering the staff ID, after a short time-out, the digits entered will be padded with leading zeros. The AN-SWER key may be pressed before the time-out as in normal room dialing operation.

- ☐ Press the **DIR** soft key.
- ☐ Press the ESC soft key to exit pocket page.

An alphabetic listing of all staff members appears after entering 3-digits or pressing the **DIR** soft key.

- c. Use the new *UP or *DN soft keys (for scrolling), to move the selection indicator (*) and view the circular list. As always, the SCROLL ▲ and SCROLL ▼ keys on the NCS may also be used to scroll through the list.
 - The PGUP and PGDN soft keys will bring you to the next "page" of three staff member selections.
 - Press the ACCEPT soft key to identify the staff member in the paging message.
 - Press the ESC soft key to exit the menu with no changes.

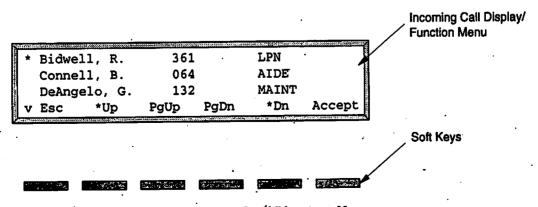


Figure 2. Staff Directory Menu

☐ If the paged staff member has a tone pager, the menu appears as seen in Figure 3.

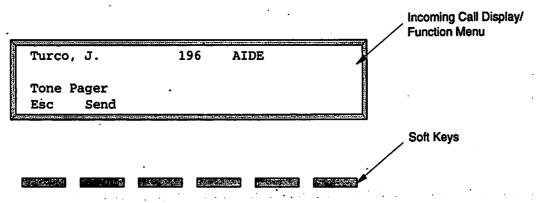


Figure 3. Tone Pager Send Confirm Message

☐ If the paged staff member has a numeric pager, the menu appears as seen in Figure 4.

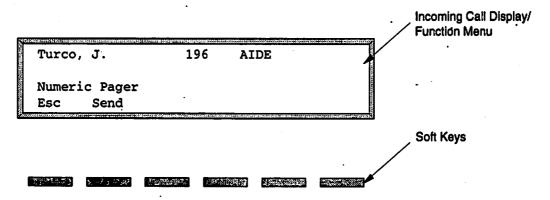


Figure 4. Numeric Pager Send Confirm Message

☐ If the paged staff member has an alphanumeric pager, the menu appears as seen in Figure 5.

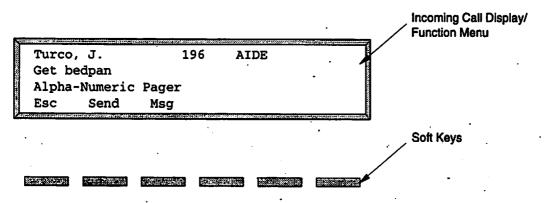


Figure 5. Alphanumeric Pager Send Confirm Message

Alphanumeric pagers have the option of sending a pre-programmed message. Up to 192 of the most commonly used messages may be programmed as a 16-character text string. To send a message, proceed as follows:

- ☐ Press the MSG soft key.
- Use the new *UP or *DN soft keys (for scrolling), to move the selection indicator (*) while viewing the list of pre-programmed messages.

 As always, the SCROLL▲ and SCROLL▼ keys on the NCS may also be used to scroll through the list.
- ☐ The PGUP and PGDN soft keys will bring you to the next "page" of three message selections.
- Press the ACCEPT soft key or dial the message number to enter the desired message.
- Press the ESC soft key to exit the menu with no changes.
- d. For all three pager types, press the SEND soft key to complete the paging function.

The page is sent to the appropriate beeper.

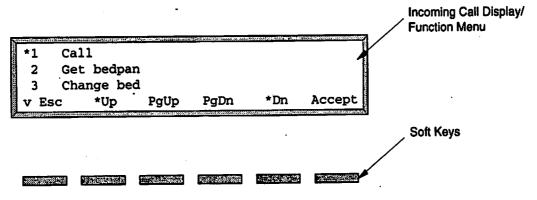


Figure 6. Message Selection

2.3 Paging During an Answered Call

To initiate pocket paging during an active call at the nurse control station, proceed as follows:

a. While communication with the station unit continues, press the program mable key on the NCS designated for pocket page.
There are three options of programming a key for pocket page: a key to initiate the pocket page menu, a key to page a specific staff member, or a key which repeats the last page. The appropriate key(s), located on the NCS or DSS console, are determined in system programming.
If the programmable key selected is to page a specific staff member, no other action is necessary. If the programmable key selected is to repeat the last page, proceed to step d. If the programmable key selected initiates the pocket page menu, proceed as follows:
b. At the prompt "ENTER STAFF ID OR PRESS SOFT KEY," perform one of the following options:
☐ Enter the three digit (001 - 366) staff identification number.
If less than three digits are dialed when entering the staff ID, after a short time-out, the digits entered will be padded with leading zeros. The AN-SWER key may be pressed before the time-out as in normal room dialing operation.
☐ Press the DIR soft key.
Press the CLASS soft key to select a member of a job classification assigned to the room/station group the active call is coming from.
An alphabetic listing of all staff members appears after entering 3-digits or pressing the DIR soft key.
c. Use the new *UP and *DN soft keys (for scrolling), as seen in Figure 2, to move the selection indicator (*) and view the circular list. As always, the SCROLL ▲ and SCROLL ▼ keys on the NCS may also be used to scroll through the list.

- The PGUP and PGDN soft keys will bring you to the next "page" of three staff member selections.
- Press the ACCEPT soft key to identify the staff member in the paging message.
- Press the ESC soft key to exit the menu with no changes.

If the CLASS soft key is pressed, the display changes as indicated in Figure 7.

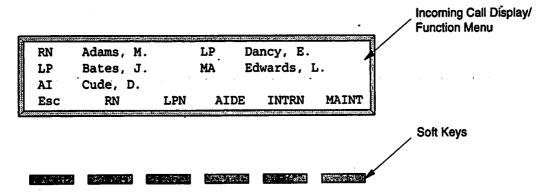


Figure 7. Paging by Class Screen

- d. Use the soft keys to select the primary staff member assigned to the room and bed of the active call.
- Press the ESC soft key to return to the first selection "ENTER STAFF ID".
- ☐ If the paged staff member has a tone pager, the menu appears as seen in Figure 3.
- ☐ If the paged staff member has a numeric pager, the menu appears as seen in Figure 4.
- ☐ If the paged staff member has an alphanumeric pager, the menu appears as seen in Figure 5.

While placing a page from the NCS, the user can press the SEND soft key without having selected a message. If the first default message programmed is "CALL," the message CALL will be initiated along with the NCS number the page is being sent from, such as NCS 01. Therefore, the message "CALL NCS 01" (or "CALL NCS 01 MATERNITY," if the NCS number is tagged with a name) will be sent without having to select a message.

to 192 c	americ pagers have the option of sending a pre-programmed message. Up of the most commonly used messages may be programmed as a 16-cer text string. To send a message, proceed as follows:
	Press the MSG soft key.
	Use the new *UP and *DN soft keys (for scrolling), to move the selection indicator (*) while viewing the list of pre-programmed messages. As always, the SCROLL▲ and SCROLL▼ keys on the NCS may also be used to scroll through the list.
	The PGUP and PGDN soft keys will bring you to the next "page" of three message selections.
	Press the ACCEPT soft key or dial the message number to enter the desired message.
	Press the ESC soft key to exit the menu with no changes.
e.	For all three pager types, press the SEND soft key to complete the paging function.
	The page is sent to the appropriate beeper.

3. PROBLEM IDENTIFICATION/SERVICE INDICATION

Problems regarding pocket page hardware and communication are transmitted to the user via the nurse control station.

A page failure, which occurs during the paging procedure, displays an error message "PAGER HARDWARE FAILING!". This message, and its accompanying tones, alerts the user that the paging transmitter is removed or has failed to respond to polling.

At an idle NCS, a SERVICE indicator will appear on the NCS to indicate a problem exists with pager hardware. To access the SERVICE information, proceed as follows:

a. Press the soft key associated with the SERVICE! message.

The first page of the problem report appears.

- b. Use the SCROLL keys to maneuver through the pages of the problem report list.
 - □ PAGER HARDWARE HAS FAILED indicates the paging system is not responding.
 - PAGER HARDWARE IS COMMUNICATING indicates the paging system is operating properly.

NOTE

"PAGER HARDWARE IS COMMUNICATING" is not an indication that service is required by the system. This message appears in a properly operating system when accessing the SERVICE information through the *Incoming Call Display/Function Menu*.

- □ PAGER HARDWARE IS NOT CONFIGURED indicates the port is not configured in system programming.
- c. When finished viewing the Problem Report, press the ESC key and return the NCS to its idle state.

To access the SERVICE information from the *Incoming Call Display/Function Menu*, proceed as follows:

a. Press the MENU soft key.

The first page of the menu appears.

- b. Using the SCROLL ▼ key, scroll down to the next page of the menu.
- c. Press the PROB soft key. The first page of the Problem Report is displayed on the NCS.

The Problem Report is a multi-page menu. Use the SCROLL keys to maneuver through the problem report list.

d. When finished viewing the Problem Report, press the ESC key and return the NCS to its idle state.

Note that you can mute the tone signaling associated with service indications by pressing the TONE MUTE key when viewing the problem report. This will mute the tone signaling associated with the most current service indication(s) at all nurse control stations and duty stations. Any new problems that occur will cause the service tones to return.

	NOTE	
If a problem does occur, contact		
representative.	,	

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Section 300 - Design and Configuration

1. GENERAL

This section contains necessary information for configuring a CARE/COM® II-E Nurse Call System, providing the exceptional features of CARE/COM II-E and at the same time being compliant with EXECUTONE requirements, UL 1069 requirements, and government or agency regulations. Specific information is presented so that you know which equipment is needed to provide certain features as well as environmental considerations. This information, along with the planning guidelines, needs to be reviewed during the system's design stages.

Accurate planning will allow for a smooth installation which will minimize time and overall cost, and will prevent disruption of the facility's activities. Additional benefits of a well planned and executed installation include; flexibility for changes and expansion at minimum cost, efficient maintenance, and increased customer satisfaction.

Also contained in this section are diagrams depicting typical system configurations. Consult these diagrams to become familiar with the CARE/COM II-E equipment.

1.1 System Planning

Table 1 in Section 400 summarizes the major stages of a typical CARE/COM II-E system installation. Use the table as a guide towards planning and coordinating the work flow so that optimum use of time and labor is accomplished.

The basis for an efficient CARE/COM II-E system installation lies in careful planning. There are guidelines and general precautions that must be considered by the salesperson, as well as the installer, during the planning stages of the CARE/COM II-E system. In addition, specific requirements and limitations must be observed so as to not impair the reliability of the entire system.

1.2 System Database

The system database plays an important role in a CARE/COM II-E system installation. Each system needs to have its own complete and accurate database. With an accurate database, you can tell at a glance the exact equipment utilized in the system, the location of the equipment, how the system is configured, as well as other important facts about the system.

A complete system database should include the following items:

Q	System Layout
	General Information
	Station Unit Data Sheets
	Nurse Control Station Data Sheets
a	System Data Sheets
	Service Log

Appendix A provides data sheets for generating the system database. The next few paragraphs explain how to use them.

System Layout

This page is provided for sketching the layout of the system to be installed. The idea is to have a pictorial reference of what the system is comprised of.

Data Sheets

The data sheets should be filled out as the system is initially being laid out. A blueprint, floor plan or similar document should be used as reference. When filled out, these configuration sheets can be used as a reference for system programming.

Service Log

The service log should be filled out for each service call in order to serve as an accurate maintenance record for the system. Providing the maintenance history, the service log can show patterns of repetitive service calls developing within the system.

1.3 Site Surveys

A well conceived survey of a hospital is the trademark of professionalism and provides immediate and long term benefits to both the customer and yourself.

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The original survey of a hospital facility, executed for the purpose of estimating the cost of a nurse call system, may not develop sufficient data to help you plan an effective installation.

In addition to equipment data, you need accurate information for the location and exact dimensions of the rooms or areas allocated for the equipment. This information will allow you to determine the lengths of cabling runs between the station units and to determine conduit and backbox requirements, etc. If the original survey does not provide sufficient information, make additional visits to obtain the necessary data.

The development of the system database should be updated as you conduct each survey of the healthcare facility. As mentioned previously, the system database includes all the information pertaining to the particular system being installed (this includes the data sheets, blueprints, floor plans, etc.).

Remember, your survey(s) will provide the basis for planning an orderly and efficient installation.

2. SYSTEM PARAMETERS

The CARE/COM II-E system is extremely flexible by nature and can be set up to meet and exceed the customer's nurse call requirements.

2.1 Compliance Information

The next several paragraphs contain information on various codes, regulations and specifications which the CARE/COM II-E Nurse Call System must meet.
NOTE

In order for the system to remain in compliance with the regulatory agencies, the system must not be installed or modified in a way that deviates from the latest technical documentation.

Furthermore, EXECUTONE will not warrant, nor provide any support whatsoever, to any installation that is not in accordance with the latest technical documentation.

EXECUTONE Compliance

The EXECUTONE CARE/COM II-E Nurse Call System is designed to meet strict safety, quality and reliability standards set forth by EXECUTONE.

All EXECUTONE brand wire and cable is UL listed for Type CL2 and CL2P cable.

NOTE
NOIE -
Remember, EXECUTONE will not be obligated to support or war-
ranty or have any liability for any product/system or its performance
if installed using non-approved wire and cable or any other non-
approved parts or components.

EXECUTONE brand cable, specifically designed to assure optimum operating performance, must be used in all installations. This includes new installation and for replacing other systems with the CARE/COM II-E system.

An EXECUTONE certified technician shall furnish and install a CARE/COM II-E Nurse Call System in accordance with all applicable codes, regulations and technical documentation. In the event of equipment malfunction, all repairs shall be performed by EXECUTONE certified technicians according to the repair information in Maintenance Section 600 of this manual. It is the responsibility of the users requiring service to report the need for service to an authorized agent.

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UL 1069 Compliance

In addition to meeting EXECUTONE's standards, CARE/COM II-E also complies with the latest UL 1069 regulations (4th edition).

In the event of equipment malfunction or failure (not due to power failure), the CARE/COM II-E system shall retain its basic visual signaling functions in compliance with the UL 1069 specification. The system design shall take into account fail-safe regulations as described by national and local safety codes.

FCC Regulations Part 15

Deviations from the instructions given in the CARE/COM II-E Technical Manual during installation could void the user's authority to operate the equipment.				
NOTE -				
This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:				
(1) This device may not cause harmful interference, and				
(2) This device must accept any interference received, including interference that may cause undesired operation.				

The system must be installed and connected in accordance with the instructions provided in the CARE/COM II-E Technical Manual to ensure compliance with the Class A limits.

NOTE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Regulations Part 68

This equipment complies with Part 68 of the FCC Rules. Before starting system installation, there are established FCC rules and regulations which must be observed. These rules permit this system to be directly connected to the telephone network. Standardized jacks are used for these connections. This equipment should not be used on party lines or coin operated lines.

On the equipment panel of this system is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for the equipment. FCC rulings require that the owner of the system to be installed give the local telephone company sufficient advance notice of intention to use privately owned telephone equipment. The owner must also furnish information as to the identification of the particular lines to be connected to the system and the affected telephone numbers. FCC registration information on the model name, FCC-assigned registration number and ringer equivalence information must also be furnished. The REN is used to determine how many devices can be connected to a telephone line. In most areas, the sum of RENs of all devices on one line should not exceed five. If too many devices are attached, they may not ring properly.

Should there be any question that the customer-provided equipment may cause harm to the telephone network, the local operating company is required to notify the customer of an impending temporary interruption of service. The customer must be given the opportunity to correct the existing problem, if possible. The telephone company must also advise the customer of their rights for filing complaints before the FCC.

The telephone company may make changes in its technical operations and procedures. If such changes affect the compatibility or use of this system, the telephone company is required to give adequate notice of the changes.

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Under no circumstances is the equipment to be altered or modified without written approval of the manufacturer. Failure to gain permission for any modification will void the warranty. If a system malfunction is suspected, the connectors terminating the equipment to the CO lines should be disconnected.

Service Requirements

In the event of equipment malfunctions, all repairs must be performed by an EXECUTONE authorized agent. It is the responsibility of users requiring service to report the need for service to an EXECUTONE authorized agent.

Trunk Ordering Information

Public Network:

Facility	Ringer	Network	DOC Connecting
Interface	Equivalence	Jack	Arrangement Code

FCC Registration Number

The CARE/COM II-E Nurse Call System is registered with the Federal Communications Commission. The registration number is as follows:

BE9USA-18908-MF-E

Supplement for Canadian Equipment

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. This equipment must also be installed using an acceptable method of connections. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure, for their own protection, that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CAUTION

Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority or electrician.

The Load Number assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of Load Numbers does not exceed 100. An alphabetic suffix is also specified in the Load Number for the appropriate ringing type (A or B), if applicable. The Load Number for the accompanying equipment is 100.

This equipment does not exceed the Class A limits for Radio noise emissions from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications.

Installation Restrictions or Codes

Local building codes and restrictions must be met when installing the CARE/COM II-E Nurse Call System. Make sure that all such codes are known.

Backbox Requirements

Each backbox in the system must be metal and UL listed. In addition, each backbox must be properly grounded to the equipment cabinet via a #10AWG wire or continuous metallic conduit.

2.2 System Capacities

STATE OF THE STATE

□ 96 station groups
□ 12 station units per cable group, 6 cable groups per equipment panel
□ 1 zone lamp with 1 zone control module per zone
□ Maximum of 2 DSSs per NCS
□ Maximum of 64 page zones and page groups
□ Maximum of 4 external page zones
□ Maximum of 49 beds in a room

NOTE
□ There is a difference between station groups and cable groups. A cable group is a group of stations physically connected together via a common cable, while a station group is a group of stations assigned to a common group number in the system setup. See paragraph 2.1 in Introduction Section 100 for more information.
□ Reference Tables 3 and 4 to determine equipment panel and auxiliary panel hardware configurations.

2.3 AC Power and Grounding Requirements

A DEDICATED COMPUTER GRADE 120 VOLT, 60 HZ, 15 AMP SERVICE LINE IS REQUIRED AT THE CENTRAL EQUIPMENT CABINET. The power source must be wired to the receptacles provided at the equipment panel and auxiliary panel. Additionally, the central equipment must be grounded via a #10AWG wire from the terminal lug on the auxiliary panel to the facility's electrical service input ground.

--- NOTE -

AC power must be installed in accordance with all applicable national and local codes. AC power must be connected to the healthcare facility's alternate power source as defined in NFPA 70 and NFPA 99.

Other equipment to enhance the power source to the system includes surge protectors, suppressors, and line conditioners.

2.4 Equipment Locations

Installing a nurse call system is seldom a straight forward procedure. The uniqueness of each customer's situation requires a "tailored" approach to each job. In selecting locations for the system's equipment, the following items may need to be avoided:

Fluorescent fixture ballasts
Excessive ESD and RFI sources
Wiring for other electrical systems, high voltage wiring and coaxial wiring that generates RF interference such as MATV, CATV, CCTV, and broadband

Whatever the nature of any adverse circumstances encountered, the installer will be faced with the necessity of designing a layout in which none of the harmful factors pose a threat to the system's performance. The information included in this section provides guidelines and precautions to assist in planning the layout of a system. A summary of environmental factors is presented in <u>Table 1</u>. It should be noted that there are specific requirements and precautions which, if not observed, will impair the reliability of the entire system. These important points are specifically emphasized.

CAUTION

Certain conditions may not initially impair the operation of newly installed equipment, but over a period of time could cause damage. Additionally, make sure that all equipment locations are of an acceptable level of cleanliness and ventilation.

2.5 Periodic Maintenance

Each CARE/COM II-E system should be maintained and tested when on a service call, on a yearly basis, or as local code dictates. The following items should be tested according to the defined maintenance procedures:

- a. Test all stations.
- b. Test all switches (code blue, emergency, etc.).
- c. Verify operation of all lamps.
- d. Verify correct operation of all features accessed via nurse control station(s), patient stations and duty/staff stations.

Table 1. Environmental Considerations

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Environmental Parameter	Applicability to CARE/COM II-E Equipment	
Ambient Light	Sufficient light should be readily available to enable inspection, testing, and other functions to be performed at the equipment location.	
Temperature	The central equipment contains semiconductors and other electronic components that are sensitive to heat. Adequate ventilation is required to allow upward circulation of air through the cabinet grills.	
	The system equipment does not require any special cooling considerations except to avoid mounting it near any heat generating object such as heat registers. Sustained average temperature should not be greater than 85°F (30°C), nor less than 32°F (0°C).	
	The stations also contain semiconductors; care must therefore be taken to avoid placement in areas producing excessive amounts of heat.	
Humidity	Avoid excessive humidity which may cause condensation on metal surfaces and consequently provide corrosion. The maximum permissible noncondensing humidity is 85% (relative).	
Dust and Airborne Contaminants	Avoid placing the central equipment in areas where dust or other airborne contaminants are present. Chemical fumes or vapors will cause corrosion or oxidation of electrical contacts.	
Water Damage	Avoid placing the equipment where the possibility of water damage exists; for instance, directly under overhead plumbing.	
Accessibility	The equipment must be located where sufficient working room is available for two technicians. Locations where the equipment may be inadvertently hidden or blocked by placement of bulky items (such as packing cases) should be avoided.	
Electrical Interference	The equipment should be located in an environment free of electrical interference. Radiation from radio receivers or transmitters and other electrical apparatus can disturb the operation of the microprocessor and other digital control circuits. Conversely, CARE/COM II-E equipment may interfere with the operation of nearby electrical systems and radios.	
Vibration	The equipment should be installed in a location free of vibration to avoid disconnecting or loosening of components.	

3. CENTRAL EQUIPMENT

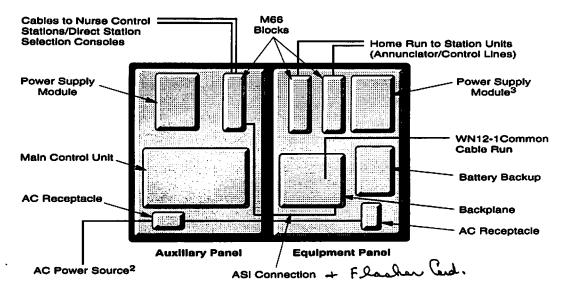
The central equipment is comprised of the equipment panel and auxiliary panel housed in the equipment cabinet. The panels can be mounted in one dual-width cabinet or in two single-width cabinets. When additional panels are required, each is mounted in a single-width cabinet. The single and dual-width cabinets are available for either flush wall or surface mounting. The flush wall mounted cabinet is provided with vented hinged door(s) and surface flunge for wall flush mounting. The surface mounted cabinet is provided with vented hinged door(s) and mounts on the wall surface.

NOTE -



The maximum distance between the cabinet housing the auxiliary panel and additional equipment cabinets mounted in separate single-width cabinets is 1200 feet.

The equipment and auxiliary panels provide the necessary connecting points for the cables from the nurse control stations, patient stations, duty/staff stations as well as other equipment required for the CARE/COM II-E system.



Notes:

- The equipment panel and auxiliary panel can each be mounted in a dual-width or separate single-width cabinets. Additional panels mount in single-width cabinets, as well.
 AC power must be installed in accordance with all applicable national and local codes.
 AC power must be connected to the healthcare facility's alternate power source as defined
- no power must be connected to the healthcare facility's alternate power source as defined in NFPA 70 and NFPA 99.

 3. The CCPSM/BBS power supply module shall maintain system power during the healthcare facility power transfer from main power to alternate power source as specified in NFPA 70 and NFPA 99.

Figure 1. CARE/COM II-E Central Equipment System Interface

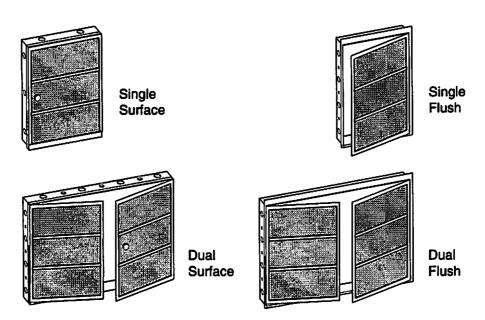


Figure 2. Central Equipment Cabinets Available

Table 2. CARE/COM II-E Central Equipment Matrix

	·	Same Comme	Contragal	September 19 Septe	A College of the Coll	
Dual-Width Cabinet	A47094S		Х			
Dual-Width Cabinet	A47094W			X		
Single-Width Cabinet	A47445S				X	
Single-Width Cabinet	A47445W					х
Auxiliary Panel	36280-1	Х	Х	Х	Х	X
Power Supply Module ¹	36290-1	Х	Х	х		
Equipment Panel	36300-1	Х	Х	Х	Х	Х
Power Supply Module ²	CCPSM/BBS	X	Х	Х		
Basic Cards	see note 4	х	х	х		
Description	Model Number	Configurations				

Notes: 1. For each power supply module, two 34-04-12007 Batteries must be ordered.

- 2. For each power supply module, two HPNBATT Batteries must be ordered.
- 3. The auxiliary panel and the equipment panel can also be mounted in separate single-width cabinets. See the note under paragraph 3 for the maximum distance possible between cabinets. The single-width cabinet is also used for additional panels.
- 4. Basic cards include: 36320-1 with piggyback 36350-1, and 36340-1. (See paragraph 3.4)

3.1 Auxiliary Panel

The Model 36280-1 Auxiliary Panel mounts in the dual-width or single-width equipment cabinet and provides installation for the following equipment:

- ☐ Main Control Unit, Expansion Unit, and Expansion Cards
- ☐ Model 36290-1 Power Supply Module with Battery Backup
- ☐ Female-female 25-pair cable(s)
- M66 Block for NCS, DSS and ASI terminations

The auxiliary panel's AC receptacle connects to the site's AC wiring to provide the direct power source for the power supply module. The AC receptacle is not switch controlled. The power supply module fully incorporates battery backup functionality along with the necessary switches, fuses, and indicators. When AC power is lost, the battery backup system can maintain full system operation for approximately ten minutes (depending on the load of the system). Reference Table 3 to determine hardware configurations supported by the auxiliary panel.

Table 3. Auxiliary Panel Configuration

HCP-42 Equipment	Total Digital Ports Provided	Hardware Supported	Power Supply Modules (36290-1) Required
Main Control Unit 4 x 8 (36100-1)	8	Support . = IN as cons.	1
Expansion card 2 x 4 (23120)	12	Minimum of 1 ASI required	
Expansion Unit 4 x 8 (36200-1)	20	Remaining ports available for ASI(s), NCS(s)*, or DSS(s)**	2
Expansion card 4 x 8 (23220)	28		2

all factor

3.2 Equipment Panel

The Model 36300-1 Equipment Panel mounts in the dual-width or single-width equipment cabinet. Each equipment panel is furnished with the following components:

- ☐ Backplane
- (2) Ribbon Cables
- ☐ M66 Block

In addition, the following equipment is also required, but not provided:

- ☐ Model CCPSM/BBS Power Supply Module with Battery Backup
- ☐ additional ribbon cable(s)
- ☐ ASI, Audio (which piggybacks the ASI card), and Flasher Card(s)

The number of equipment panels required for the system is relative to the total number of station units installed. Although Table 4 represents a 'typical' system, the maximum number of units which can be installed is **not** limited to 216.

Table 4. Equipment Panel Configuration

Station Units*	Cable Groups**	ASI***	Equipment Panel(s)
24	2	1	
48	4	2	1
72	6	3	
96	8	4	
120	10	5	2
144	12	6	
168	14	7	
192	16	8	3
216	18	9	

A station unit is defined as a device requiring a home run connection for annunciation.

2 8

^{** 12} station units per cable group.

^{***} Each ASI occupies one J5 connector and a corresponding card installed on the equipment panel. However, each ASI also "occupies" a port on the auxiliary panel, diminishing the overall port availability.

3.3 Power Supply Modules

The Model CCPSM/BBS Power Supply Module mounts on the equipment panel, and the Model 36290-1 Power Supply Module mounts on the auxiliary panel. Both power supply modules fully incorporate battery backup functionality along with all the necessary switches, fuses, and indicators. When AC power is lost, the battery backup system can maintain full system operation for approximately ten minutes (depending on the load of the system).

NOTE -

The CCPSM/BBS Power Supply Module shall maintain system power during the healthcare facility power transfer from main power to alternate power as specified in NFPA 70 and NFPA 99.

3.4 Basic Cards

There are two basic cards on the equipment panel. They are:

- ☐ 36320-1 ASI Card (3 maximum) with piggyback audio card
- ☐ 36340-1 Flasher Card

There are two cards on the auxiliary panel. They are:

- □ 23120 (2x4) Expansion card (mounts on the Main Control Unit)
- 23220 (4x8) Expansion card (mounts on the Expansion Unit)

3.5 External Paging System Interface

There are four various installation points on the auxiliary panel for connecting external paging amplifiers. Using external amplifiers provides increased paging coverage via the External Page Zone function of the Voice Page menu on the NCS.

4. NURSE CONTROL STATION

The Model 36400-1 Nurse Control Station features a back-lit display, keyboard, and push-to-talk handset. It is used by the nursing staff to effectively communicate with the station units and other NCSs.

As seen in Figure 3, each NCS connects to a specially designed receptacle, which then terminates at the central equipment via the #22AWG, 4-pair station cable (p/n 421764 - PVC/422824 - plenum). The nurse control station is desk mounted, no backboxes are required for installation.

NOTE

One duty/staff station set for duty mode should be installed adjacent to each nurse control station.

The Model 36500-1 DSS console is an optional accessory, which works in conjunction with the NCS to provide 48 additional programmable keys. Like the NCS, the DSS is desk mounted. Each DSS connects to a station connecting block by means of a plug-in connector, terminating at the central equipment via the 4-pair station cable.

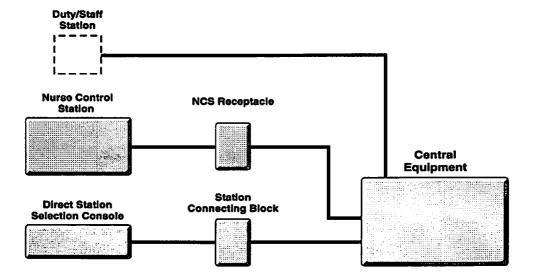


Figure 3. CARE/COM II-E Nurse Control Station System Interface

5. PATIENT STATIONS

The CARE/COM II-E patient stations can be either wall surface or wall flush mounted using the appropriate three gang backbox. As shown in <u>Table 5</u>, several models are available to meet the most exact patient room requirement. Note that the dual patient stations can easily accommodate either right/left or left/right bed orientations (via the system setup). <u>Figure 4</u> shows how each station represents the central point of control inside the patient's room. The most important function of the patient station is to provide the necessary information regarding a patient's needs to the nurse control station. These stations have ESD protection to minimize system disruption and to protect the system from lock-up.

The stations are switch selectable for the type of call originated when the call device is removed from its receptacle, either an emergency or normal call can be transmitted.

The patient sideguard station allows for interfacing with Hill-Rom® compatible beds with side-rail communication (including bed exit systems 1 and 2). Connections to the bed receptacle requires additional connectors and cabling. Disconnecting the bed from its receptacle causes the patient sideguard to originate a call. This call can only be canceled by inserting the call cord back into its receptacle. In the case where a Hill-Rom bed is not used, a dummy plug can be inserted into the bed receptacle causing all functions to revert back to the patient station.

To provide the patient with call origination capability, a number of devices are available as indicated in <u>paragraph 6</u>. These devices plug directly into the patient station's receptacle.

Peripheral devices are available to increase the functionality of the CARE/COM II-E patient stations. Inputs are provided for code blue stations and emergency stations. Outputs are provided for control of entertainment devices and environmental devices (with entertainment audio muting during intercom). For these peripherals, additional connectors are required to connect the device to the patient station. See <u>Table 6</u>.

Table 5. CARE/COM II-E Patient Station Matrix

			Sales Sa	Sales Control
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200	200	200	10/19	

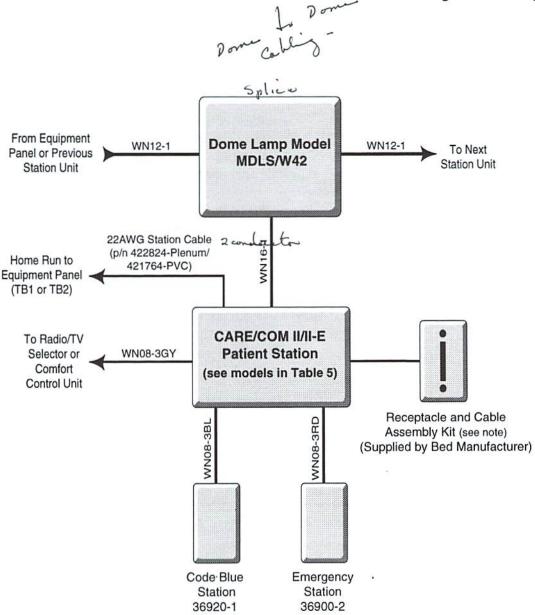
Description	Model Number	Configurations			
Flush Backbox	see note 2	X	X	X	
Dual Sideguard Station ¹	3080215		_		х
Single Sideguard Station ¹	CCPCS/W43			X	
Dual Patient Station	CCP2S/W43		X		
Single Patient Station	CCP1S/W43	Х			

Notes: 1. Sideguard stations require a Model 33955 Dummy Plug for each receptacle (one for single stations; two for dual stations).

 Minimum dimensions for the UL-listed metal backbox are: 8-13/16"W x 4-1/2"H x 3-5/16"D. Note, however, that the minimum area for the station faceplate is 6-3/8"W x 4-1/2"H.

Table 6. CARE/COM II-E Patient Station Connector Requirements

Description	Model Number	Configurations		ns
16-Pin Connector Assembly	AA39028			Х
12-Pin Edge Connector	AA38642	X		
9-Pin Edge Connector	AA38089	X		
6-Pin Edge Connector & Strain Relief	15-06-50006, 15-06-51006	х		
3-Pin Edge Connector & Strain Reilef	15-06-50003, 15-06-51003	Х	X	



Note: The receptacle and cable assembly kits are required in sideguard bed applications. One receptacle is needed for single sideguard stations; two receptacles are needed for dual sideguard stations.

Figure 4. CARE/COM II-E Patient Station Interface

6. CALL ORIGINATION DEVICES

As mentioned in <u>paragraph 5</u>, several types of patient stations are available for the CARE/COM II-E system. For further flexibility, there is a choice of call origination devices which interface to those patient stations. As the name implies, a call origination device provides the patient with the capability of originating a call to the nurse. Patient control units give the patient the added ability to control entertainment and environmental devices. Furthermore, with the patient control unit, intercom from the nurse can be heard through the pillow speaker.

A call origination device plugs directly into the patient station's receptacle. Note that all call origination devices are compatible with all patient station types, however, models M18A, M88, and PCU-3 are NOT to be used by a patient undergoing oxygen therapy.

Table 7. Call Origination Device Matrix

Description	Description Model Number Con		rations
Call Cord for Oxygen Environment (8')	M518X	X	
Geriatric Call Cord (8')	M88	X	
Call Cord (8')	M18A ³	X	
Call Button	M282	32 X	
3-Button Patient Control Unit	PCU-3 ^{2, 3}	_	X

Notes: 1. For each patient, select a call origination device.

- 2. Intercom from the NCS can be set to go through the pillow speaker in the patient control unit (during system setup). Not True —
- The PCU-3 and the M18A are equipped with six foot cords. These units are also available with fifteen foot cords as the PCU-3-15 and the M18A-15, respectively.

7. DUTY/STAFF STATION

Like the CARE/COM II-E patient stations, the duty/staff station can be either wall surface or wall flush mounted using the appropriate three gang backbox. The duty/staff station represents the central point of control inside a utility room or other room used by the nursing staff. As the name implies, the station can be set for either duty mode or staff mode; mode selection is switch selectable. The most important function of the duty/staff station is to provide incoming call indications (when set for duty mode). In staff mode, the station can communicate with the attendant at the nurse control station but does not receive indication of patient calls. The duty/staff station has ESD protection to minimize service disruption and to protect the system from lockup.

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NOTE

One duty/staff station set for duty mode SHOULD be installed in each cable group as well as adjacent to each nurse control station.

Each duty/staff station requires one 9-pin edge connector for connecting to the common cable and home run. Peripheral devices are available to increase the functionality of the CARE/COM II-E duty/staff station. Inputs are provided for emergency and code blue stations. For these peripherals, additional connectors are required in order to connect the device to the duty/staff station. See <u>Table 6</u>.

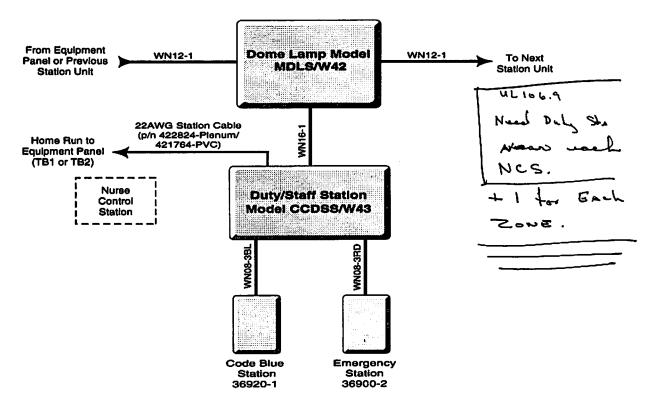


Figure 5. CARE/COM II-E Duty/Staff Station Interface

8. CODE BLUE AND EMERGENCY STATIONS

CARE/COM II-E code blue stations are provided for call origination in such extreme situations as cardiac arrest. The emergency station provides for call origination in a wet/dry environment.

Code blue and emergency stations can connect to a patient or duty/staff station, or be used as a stand-alone device. Each code blue and emergency station associated with a station requires a run of WN08-3 cable from the station unit.

The code blue station and the emergency station can be wall surface mounted using a UL listed metal backbox with a single gang adapter, ordered separately.

9. DOME LAMP AND ZONE LAMP

The CARE/COM II-E dome lamp is required to provide visual signaling of all patient calls. The dome lamp can be provided with up to four separate lamp sections. Each position can show two levels - blinking and steady.

In dome lamp applications, the dome lamp connects to a patient station or a duty/ staff station, with the call/emergency or code blue lamps supervised by the station unit. (The paragraphs on the patient station and duty/staff station have figures showing the interface to the dome lamp). In zone lamp applications, the zone control module connects to the central equipment, with the call, emergency and code blue indication supervised by the backplane. The zone lamp utilizes three lenses, for each call indication.

The dome lamp must be vertically mounted using a UL listed metal backbox with a two gang adapter, ordered separately. Filler plates are used to cover an empty socket.

Table 8. CARE/COM II-E Dome Lamp Matrix

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Description	Model Number	Configurations				
Surface or Flush Backbox	see note 3	Х		<u> </u>		
Filler Plate (grey)	A44377-GY					Х
Blue Lens	A44376-1B		Х			
Red Lens	A44376-1R			X		
White Lens	A44376-1W		Х	X	X	
Lamp Socket	A44835		Х	X	X	
Lamp	30-23-01820		х	X	X	
4-Section Dome Lamp Base	MDLS/W42	X				

Notes: 1. Crimp connectors are used for the dome lamp.

One clear lamp and one lamp socket are required for each dome lamp position.Filler plates are required for lamp positions not occupied by a lamp, socket, and lens.

^{3.} Minimum dimensions for the vertically mounted UL-listed metal backbox are: 4-11/16"W x 4-11/16"H x 2-7/8"D.

10. ENTERTAINMENT AND ENVIRONMENTAL FACILITIES INTERFACE

CARE/COM II-E entertainment and environmental interface units provide patients with the ability to control radios, TVs, lights, etc. <u>Table 9</u> shows the required equipment for the different applications.

NOTE

The entertainment and environmental units MUST be used whenever interfacing to ANY entertainment or environmental device.

The entertainment and environmental interface units connect to a patient station, and to the external devices such as radios, TVs, lights, etc. TV sets must have automatic adjustments for color and tint. When connecting to lights, a low voltage controller is required. (Recommended unit is a Hill-Rom® Solid State Universal Low Voltage Controller, p/n P531A120-1). See Figures 6 - 9 which shows the system interface for the new and older model entertainment and environmental interface units.

Each Model 33920-1, -2 Television and Light Interface requires one run of WN06-2GY to the patient station for the first bed, and a run of WN06-2GN for the second bed (used with the 33920-2). In addition, this unit connects to the M-217/4101 24 volt power supply via WN02-3 cable. Other connections may include: WN04-2GY to a television set, WN02-4GY or WN04-2GY to a low voltage controller for lights, etc. At the interface unit, the appropriate cable is connected via IDC connectors with strain relief's. The 33920-1, -2 interface unit can be either wall surface or wall flush mounted using a UL listed metal backbox with one gang adapter, ordered separately. Paragraph 12.2 provides detailed information on backboxes used throughout the CARE/COM II-E system.

Each Model 31780-2 and 31770-2 Entertainment Interface requires one run of WN06-2GY to the patient station for the first bed, and a run of WN06-2GN for the second bed (used with the 31770-2). In addition, these units connect to the M-217/4101 24 volt power supply via WN02-3 cable. Other connections may include: WN04-2GY to a television set, and WN14-1 to a radio distribution system. At the interface unit, the appropriate cables are connected via plug-in connectors and crimp connections. The 31780-2 and 31770-2 entertainment units can be either wall surface or wall flush mounted.

The older model Entertainment/Environmental devices, J7376R1S/W43P, J7376R2S/W43P, J7377C1S/W43P, J7377R2S/W43P and J7390RCS/W43P, connect between the patient station and entertainment equipment and/or comfort control devices. Cabling required for these units include WN05-1 cable, WN08-3 cable (for dual patient station installations), WN02-3 (for connections to the Power Supply) and WN14-1 cable (for connections to the radio distribution system).

The required M-217/4101 Power Supply(s) must be installed in a UL recognized enclosure having provisions for conduit connections for the AC input. Furthermore, the M-217/4101 Power Supply(s) must plug into a UL recognized receptacle mounted within the enclosure. Each M-217/4101 can support up to 40 entertainment and environmental units.

For radio distribution, an amplifier with a 25 volt output of sufficient wattage is required. To determine the wattage, multiply the number of beds with radio units by 375mW. For example, 100 beds with radio units would require an amplifier with a minimum of 37.5 watts.

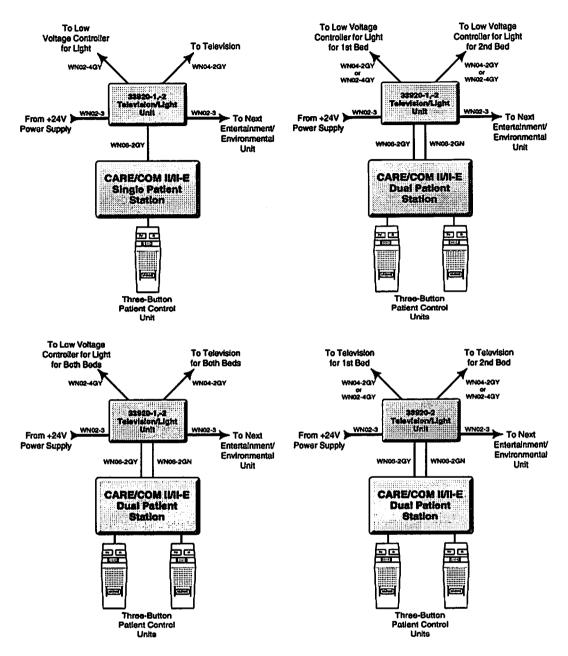
Table 9. CARE/COM II-E Entertainment and Environmental Interface Matrix

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	ė.			ڊ م	A CONTRACTOR OF THE PROPERTY O				1 8 6 7 C	
	Number of Beds	1	2	1	2	1	2	1	2	
Television/Light Unit	33920-1,-2	X	X (2)							
Single Entertainment Unit	31780-2					X				
Dual Entertainment Unit	31770-2						X		X	
Single Radio/TV Selector	J7376R1S/W43P					Χ				
Dual Radic/TV Selector	J7376R2S/W43P						X			
Single Comfort Control	J7377C1S/W43P			X						
Dual Comfort Control	J7377C2S/W43P				X					
Radio/TV Selector and Comfort Control	J7390RCS/W43P							X		
Connectors	see note 4	X	х	х	x	Х	х	Х	X	
Surface or Flush Backbox	see note 5	x	X (2)	X	×	х	х	X	X (2	
Three-Button PCU	PCU-3 ⁶	X	X(2)							
Description	Model Number	er Configurations								

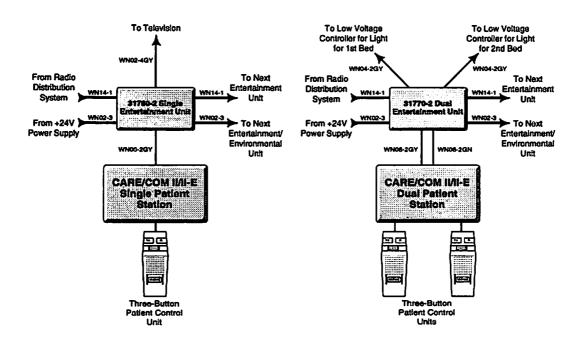
Notes: 1. Where (2) appears, two units are required (one for each bed).

- 2. Audio Isolation transformers must be used to provide TV audio Isolation. The model 33920-1,-2 comes with the required transformer. When using the 31780-2, 31770-2, J7376 or J7390 units to provide an interface to TVs with an audio output impedance between 8 and 25 ohms, one 02026 Transformer (ordered separately) must be installed. If interfacing to a device (such as radio distribution) that has an audio output impedance of between 1.6K and 2.4K ohms, use transformer part number A09387. If interfacing both to a TV and to radio distribution, use two transformers, part number A09387; one transformer is for isolation and the other is for impedance matching.
- 3. The 33920-1 unit provides one audio channel, the 33920-2 unit provides two Individual audio channels. Each unit has two sets of switch contacts.
- 4. The 33920-1,-2 requires one 2-pin IDC connector with strain relief, one 8-pin IDC connector with strain relief, and one 9-pin IDC connector with strain relief, the 31780-2 requires one AA38696 22-pin connector; the 31770-2 requires two AA38696 22-pin connectors.
- Minimum dimensions for the UL-listed metal three-gang backbox are: 8-13/16°W x 4-1/2°H x 3-5/16°D.
 Minimum dimensions for the UL-listed metal single-gang backbox (required for the 33920-1, -2 unit) are: 4-11/16°W x 4-11/16°H x 2-7/8°D.
- 6. The patient control unit is listed for reference.
- 7. Crimp connectors are used for the 31770-2 and 31780-2 entertainment and environmental interfaces.



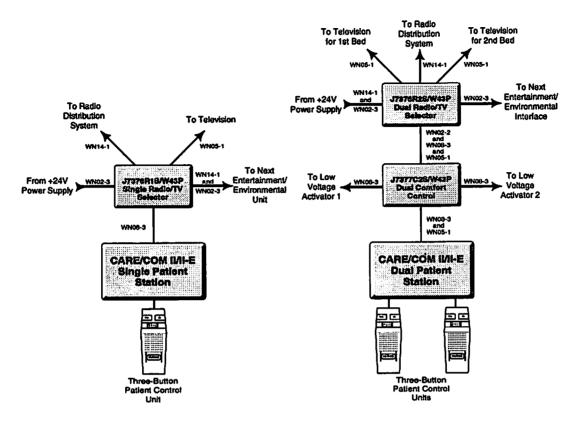
- Notes: 1. TV sets must have automatic adjustment of color and tint.
 - 2. Lights, drapes, etc. require a low voltage controller.
 - Any combination of up to 40 entertainment/environmental units can be powered from one M-217/4101 Power Supply.

Figure 6. CARE/COM II-E Television/Light Interface



- Notes: 1. TV sets must have automatic adjustment of color and tint.
 - 2. Lights, drapes, etc. require a low voltage controller.
 - Any combination of up to 40 entertainment/environmental units can be powered from one M-217/4101 Power Supply.

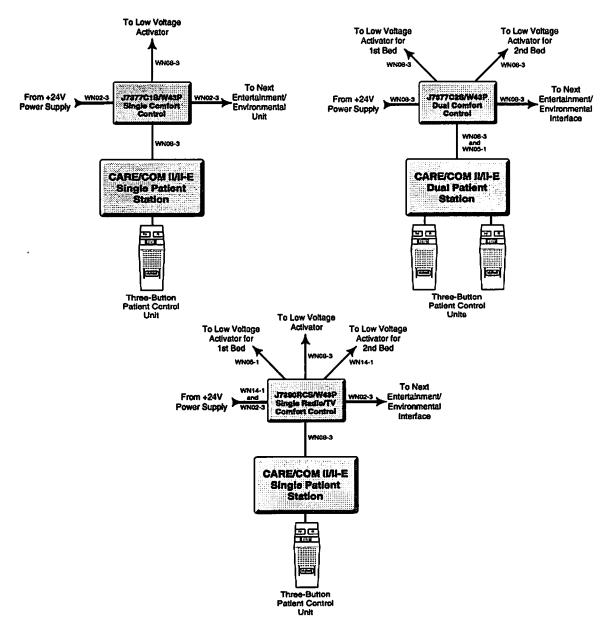
Figure 7. CARE/COM II-E Entertainment and Environmental Interfaces



Notes: 1. TV sets must have automatic adjustment of color and tint.

- 2. Lights, drapes, etc. require a low voltage controller.
- 3. Any combination of up to 40 entertainment/environmental units can be powered from one M-217/4101 Power Supply.

Figure 8. Older Model Radio/Entertainment Interface Units



- Notes: 1. TV sets must have automatic adjustment of color and tint.
 - 2. Lights, drapes, etc. require a low voltage controller.
 - Any combination of up to 40 entertainment/environmental units can be powered from one M-217/4101 Power Supply.

Figure 9. Older Model Comfort Control Units

11. WIRE AND CABLE

A large portion of a CARE/COM II-E system installation consists of connecting various equipment using cables and wires. It is *very* important that all wiring and cabling requirements are met. Use only the recommended type of "Approved EXECUTONE Brand" wire and cable necessary for the installation. Using the correct wire and cable will ensure proper system performance and increased reliability.

EXECUTONE cannot support or warranty any product/system or its performance if installed using non-approved wire and cable.

EXECUTONE Brand cable has been specifically designed for the CARE/COM II-E system to assure optimum operating performance and must be used in all installations. This includes new installations and for upgrading older systems.

Notice the color coded cable sheaths. With the color coded sheaths, cable coming out of a backbox can be accurately identified. In addition, plenum versions of the cables are available to meet UL requirements for cable running in ducts, plenums, or other air handling spaces.

Table 10. CARE/COM II-E Wire and Cable Matrix

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			S. C.			§ 3	Se 3	9. E	Series.		S OF S				چې کی چې	REPORT N	Partie Company	
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	\$ \$	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 50 Q	3 6 4	TO SOLUTION OF THE PARTY OF THE	Co.	10 S		40.00	15 Part 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Co-Company Control of	FOR SHIPPING SON			To the state of th	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	15 P. 18 P.	
WN16-1		X										-						
WN14-1												X						
WN12-1	X												X					
WN08-3GY															X			
WN08-3BL			X															
WN08-3RD				X											•			
WN06-2GY																	X	
WN06-2GN														٠				X
WN05-1								X²										
WN04-2GY										X								
WN03-2						X												
WN02-4GY							,				X			X				
WN02-3									X				_					
WN02-2						X ³		·										
422824-Plenum/ 421764-PVC					x											х		
Cable Model Number							U	eage										

Notes: 1. Use only EXECUTONE - brand cable.
2. Required for second bed on dual patient stations only.
3. Connection to second zone control module.

Retro Sit. Can Con IT -10 Stat. - Zone -Lose of 2 gu Zone 60 stat. pur grip Cand

11.1 Cable Group Cabling

A maximum combination of 72 patient stations and duty/staff stations may be connected to an equipment panel. These station units are connected to the equipment panel in a configuration of 6 cable groups.

Each cable group requires its own run of WN12-1 cable direct from the central equipment cabinet. This cable run carries the power, ground, intercom and data for all the stations in a cable group. The capacity for the cable group common run is 12 annunciation points.

Additional wires may need to be added to the cable runs for the cable groups. This is dependent on the distance from the power supply.

For proper system performance, cable should be routed through the proper conduit and kept as short as possible. Note that the cable group's common run may be routed to the central equipment cabinet by either of two ways, or by a combination of both ways. The two methods of cable routing are: dome-to-dome cabling and station-to-station cabling.

- NOTE -

The recommended cabling method is the dome-to-dome method; see the following paragraphs.

Dome-to-Dome Cabling

This is the recommended method of cabling. The common run cabling is routed through the dome lamp backboxes (or separate junction box near the dome lamp). Separate cable lengths, called drop cables, are installed between each dome lamp and its respective station unit.

Dome lamp junctions are closer together on an average than the station units. This means the total continuous length of the cable group common run to the last station is much shorter in the dome-to-dome cabling method than in the station-to-station method (excluding the drop cables between the dome lamps and the stations).

In four

Station-to-Station Cabling

	NOTE tations, the station-to-station cabling method is
not recommended.	
cable group. Therefore, the	on run cabling is routed through each station unit in the e total continuous length of the cable group's common asing the expense. Also, the cabling running in and box requires more space.
	d, the cable group common runs should be thoroughly ailed information in the Maintenance section.
11.2 Cable Terminati	ons
	aspects to consider when planning an installation is erly. A few guidelines to follow are:
servicing, in add	d be marked to facilitate future troubleshooting and ition to the cable sheaths being color coded. Further-coming out of a backbox should be adequate and
All cable sheaths tool.	s should be stripped using the appropriate stripping
	NOTE -
Recommended tool is: N	leuses Cable Sheath Stripper, part number N-
2060.	
wires that will be	vires that will be terminated to IDC connectors. Only e connected via crimp connectors need to be stripped priate stripping tool).

Recommended tools include: Klein Wire Stripper-Cutter, part number

11045 and 11046; Ideal Wire Stripper, part number T-6.

300 - 35

Design and Configuration

0	All cables must be taped to prevent shorts between foil of cable and the backbox of the station unit.
0	All unused conductors must individually have a connector crimped onto the end.
۵	Shield and drain wire should be insulated with a dielectric tubing, "spaghetti" type material and held in place by the cable tape.
	nended dielectric tubing is: Alpha Wire Corp. Clear PVC Tubing, nber PVC 105-18.
0	Data and audio wire pairs should each remain twisted to reduce the possibility of EMF interference.
	By adhering to these basic guidelines a CARE/COM II-E installation

increasing overall customer satisfaction.

12. INSTALLATION ACCESSORIES

CARE/COM II-E requires certain installation accessories which must be factored in during system planning. Such equipment includes conduit and backboxes. The next few paragraphs provides information on these items.

12.1 Conduit Requirements

It is recommended that all CARE/COM II-E system cabling be run through metallic conduit. Conduit will help prevent accidental cable cutting, as well as provide increased protection from fire and EMI (ESD & RFI) sources.

CAUTION

System cabling should not be placed in the same pipe, conduit, or compartment containing other electrical systems, high voltage wiring, or coaxial wiring that generates RF interference such as: MATV, CATV, CCTV, broadband and pocket page (UHF, VHF, and low band).

For proper system performance, the correct conduit must be used for the cabling runs. Use <u>Table 11</u> to determine the conduit requirements when running the cabling for a particular installation. The following paragraphs explain how to read Table 11. Again, system cabling must not be placed in the same pipe, conduit or compartment containing other electrical wiring.

Listed to the left of Table 11, reading from top to bottom, are the EXECUTONE cables and wires with factor numbers. The factor numbers are based on the area within the circumference of each cable and wire.

Listed across the bottom of the table are conduit sizes ranging from 1/2" to 3". Next to each conduit size is the appropriate conduit factor number for the conduit area based on 40% fill.

Choosing Conduit Size for the Same Type of Cable or Wire

Above each conduit size is the maximum recommended number of cables and wires which will fit into the particular conduit size. Use this value for the particular cable needed. This may be exceeded slightly where absolutely necessary, since the number of cables or wires is based on 40% fill.

CAUTION

As mentioned previously, system cabling must not be placed in the same pipe, conduit or compartment containing other electrical systems, high voltage wiring, or coaxial wiring.

Choosing Conduit Size for a Combination of Cables and Wires

To determine the conduit size required for a combination of different cables and wires, proceed as follows:

- a. Refer to the factor numbers of the particular cables and wires going into the conduit. Add all the cable and wire factor numbers. When more than one large cable (represented by the * symbol in Table 11) are used in the same conduit, add a factor of 4 to the sum of cable and wire factor numbers.
- b. With this figure, refer to the conduit factor numbers given for the various conduits. Choose the next conduit size which is larger than the total sum of cable and wire factor numbers you have computed.

Example:

Choosing the conduit size for two WN11-1 cables (cable factor #11 each), four WN05-1 cables (cable factor #3 each), one 14AWG wire (factor #1-1/2), two 12AWG wires (wire factor #2 each).

2 WN11-1, Cable Factor #11 (2 x 11)	22
4 WN05-1, Cable Factor #3 (4 x 3)	12
1 14AWG, Wire Factor #1-1/2 (1 x 1-1/2)	1-1/2
2 12AWG, Wire Factor #2 (2 x 2)	4
Large Cable (mult. WN11-1 cables) Factor #4	4
TOTAL CABLE/WIRE FACTOR	43-1/2

Refer to the conduit factor numbers on the bottom of Table 11. A 1-1/2" conduit, which has the next larger factor number of 51, would be used.

Table 11. Conduit Size Chart for EXECUTONE Cables and Wires

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CABLE AND WIRE TYPE	FACTOR #	MAX	IMUM	NUMBER WIRE		SAME A CONI	TYPE DUIT	CABLE	OR
421764/ 422824	2	3	7	10	19	2 5	4 2	7.5	100
W N O 2 - 1	0.75	9	18	2 8	5 0	6 8	112	200	266
W N 0 2 - 2	2	3	7	10	19	2.5	4 2	7.5	100
W N 0 2 - 3	3	2	4	7	1 2	17	28	5 0	66
W N 0 2 - 4 G Y	2	3	7	10	19	2 5	4 2	7 5	100
W N 0 3 - 2	3	2	4	7	1 2	17	28	5 0	66
W N 0 4 - 2 G Y	3	2	4	7	1 2	17	28	5 0	66
W N 0 5 - 1	3	2	4	7	1 2	17	28	5 0	66
WN08-3GY	3	2	4	7	1 2	17	28	5 0	66
W N 0 8 - 3 R D	3	2	4	7	1 2	17	. 28	5 0	66
WN08-3BL	3	2	4	7	1 2	17	28	5 0	66
W N 1 1 - 1 *	11	-	1	1	3	4.	7	1 3	18
W N 1 2 - 1 *	1 1	17.0	1	1	3	4	7	1 3	18
W N 1 3 - 1 *	6	1	1 :	3	6	8	1 4	2 5	3 3
WN14-1*	6	1	1	3	6	8	1 4	2 5	3 3
WN15-1*	2 0	-	1	1	2	3	6	1 1	1 5
W N 1 6 - 1 *	2 0	-	. 1	1	2	• 3	6	1 1	1 5
12AWG**	2	3	7	10	19	2 5	4 2	7 5	100
14AWG**	1.5	4	9 .	1 4	2 5	3 4	5 6	100	1 3 3
16AWG**	1	7	14	2 1	3 8	5 1	8 4	150	200
18AWG**	0.75	9	18	28	5 0	68	112	200	266
Conduit Size		1/2"	3/4"	1 "	1-1/4"	1-1/2"	2 "	2-1/2"	3 "
Factor #		7	14	2 1	3 8	5 1	8 4	150	200

^{*} For multiple large cables add a factor of 4.

^{**} Thermoplastic wire (Type F, TF, or TW).

Plenum versions of the above cable are available.

Additional Conduit Information

In order to run cables in conduit, several methods are available:
 Rigid metal, intermediate metal, or non-metallic conduit Flexible metal conduit Electrical metallic tubing Wireways Cable tray
Rigid Metal, Intermediate Metal, or Non-metallic Conduit
Using this method, the cables are supported and protected from mechanical injury, fire, and EMI (ESD or RFI) sources by being installed in ferrous or nonferrous types of rigid metal conduits. Ferrous conduits are manufactured from wrought iron or steel with coatings such as black enamel, electrogalvanizing, hot-dip galvanizing, or similar material. Nonferrous conduits are manufactured from aluminum or brass (silicon bronze).
Non-metallic conduits are manufactured from a suitable material which is resistant to moisture and chemical atmospheres. For the CARE/COM II-E system, the non-metallic conduit must be flame-retardant and resistant to impact and crushing or distortion due to heat, low temperature or sunlight. The only type of non-metallic conduit suitable is the heavy-wall type constructed of polyvinyl chloride (PVC).
NOTE —
PVC conduit is not recommended and may not meet local code requirements.
Flexible Metal Conduit
Flexible metal conduit is used to a limited degree in frame buildings in which rigid conduit would be difficult to install and a pull-in/pull-out conduit system is desirable. The NEC states that flexible metal conduit may be used as a grounding means in 6-foot lengths, or if both conduit and fittings are approved, each run of flexible metal conduit must contain a bare or insulated grounding conductor. This grounding conductor must be attached to each box or other equipment

Electrical Metallic Tubing

supplied with such conduit.

When using electrical metallic tubing (EMT), cables are installed in a thin-walled metallic tube or thin-walled conduit. Electrical metallic tubing is similar to rigid conduit except that the tubing is constructed of much thinner material. EMT is also the most common type of conduit system.

Wireways

When wireways are used, cables are supported and protected in a sheet metal trough. The trough is installed exposed, mounted on the ceiling or wall, or supported from the roof structure. The trough is fitted with a sheet metal cover which provides access to the cables inside. Knockouts are provided for branch conduits, etc.

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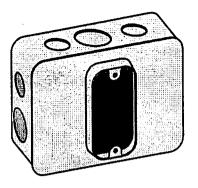
Cable Tray

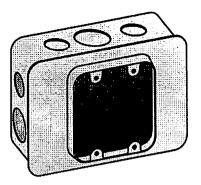
A cable tray system consists of a unit or assembly of units or sections and associated fittings and is made of metal or other non-combustible material. The cable tray system forms a rigid structure which supports the cables. This rigid structure includes ladders, troughs, channels, etc. After the cable has been installed, a cover is installed.

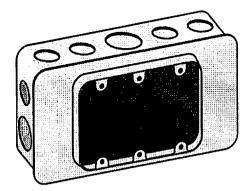
12.2 Backbox Requirements

The type and size of backbox used for mounting each unit in the CARE/COM II-E Nurse Call System is based on the equipment and whether the unit is wall recessed or surface mounted. Note than only UL listed metal backboxes must be used. See <u>Table 12</u> to determine the appropriate backbox required for each model specified and the most commonly used and recommended backbox mounting heights. All dimensions shown are in feet, normally measured from floor level to center of backbox.

center of backbox.
NOTE
Each backbox must be UL listed and must be properly grounded to the central equipment via #10AWG wire or continuous metallic conduit.
Recommended sources for backboxes are: Steel City or Race for wall flush mounting, and Wire Mold for wall surface mounting.
In addition, if conduit is used, make sure the backboxes specified are compatible with the conduit diameters selected.
NOTE -
All mounting heights are measured from center of backbox to floor level, except for units installed in hazardous anesthetizing locations.







Backbox with Single-Gang Adapter

Backbox with Two-Gang Adapter

Backbox with Three-Gang Adapter

Figure 10. Typical Backboxes (With Single, Two and Three Gang Adapters)

Table 12. Recommended Backboxes and Mounting Heights

Description	Model Number	Backbox Size	Mounting Height
Dual-Width Cabinet	A47094S	special	4.5 Ft
Dual-Width Cabinet	A47094W	special	4.5 Ft
Single-Width Cabinet	A47445S	special	4.5 Ft
Single-Width Cabinet	A47445W	special	4.5 Ft
Zone Control Module	EX-ZCM3	Three-Gang ³	7.5 Ft
Single and Dual Patient Stations	all	Three-Gang ³	4.5 Ft
Duty/Staff Station	CCDSS/W43	Three-Gang ³	4.5 Ft
Code Blue Station	36920-1	Single-Gang ¹	3.5 Ft
Emergency Station	36900-2	Single-Gang ¹	3.5 Ft ⁴
Dome Lamp	MDLS/W42	Two-Gang ²	7.5 Ft
Television/Light Interface Unit	33920-1, -2	Single-Gang ¹	7.5 Ft ⁵
Entertainment Interface	31780-2, 31770-2	Three-Gang ³	1.5 Ft ⁵
Single Radio/TV Selector	J7376R1S/W43P	Three-Gang ³	1.5 Ft ⁵
Dual Radio/TV Selector	J7376R2S/W43P	Three-Gang ³	1.5 Ft ⁵
Single Comfort Control	J7377C1S/W43P	Three-Gang ³	1.5 Ft ⁵
Dual Comfort Control	J7377C2S/W43P	Three-Gang ³	1.5 Ft ⁵
Radio/TV Selector and Comfort Control	J7390RCS/W43P	Three-Gang ³	1.5 Ft ⁵

Notes: 1. Electrical Backbox (4-11/16"W x 4-11/16"H x 2-7/8"D) with single-gang adapter.

- 2. Electrical Backbox (4-11/16"W x 4-11/16"H x 2-7/8"D) with two-gang adapter.
- 3. Electrical Backbox (8-13/16"W x 4-1/2"H x 3-5/16"D) with three-gang adapter.
- 4. Mount Station at 6.5 feet if installing station with pullcord attached.
- 5. Or above accessible ceiling.

13. APPLICATION DRAWINGS

The following pages provide real world information on CARE/COM II-E applications. Table 13 can be used as a system configuration guide complete with a backbox and component legend. The symbols used in the system configuration guide are particularly useful when developing a system layout (found in the database data sheets). Figures 11 and 12 are examples of application drawings showing how CARE/COM II-E can be set up for a particular facility,8 complete with floor plan and an individual room configuration.

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14. ORDERING INFORMATION

The equipment required to install a CARE/COM II-E system is ordered through the Customer Service/Inside Sales Department in Milford, CT. This section provides the part numbers available for the CARE/COM II-E system. In addition, take note of any optional features the customer has ordered, and make certain the proper equipment has been ordered.

Table 13. CARE/COM II-E System Configuration Guide

				Co	emponents Required	
Symbol	Description	Backbox Required	Mounting Height	Part Number	Model	QTY
CE 1	Central Equipment Dual Cabinet, Surface	EXECUTONE A47094S 48"W x 36"H x 6"D	4.5 Ft	36300-1 36318-1 49-07-00001 CCPSM/BBS HPNBATT 36320-1 36340-1	Equipment Panel Ribbon Cable M66 Block Power Supply Module Battery Backup ASI Card Flasher Card	1-3 3 1-6 1-3 2-6 1-9 1-3
CE 1	Central Equipment Dual Cabinet, Flush	EXECUTONE A47094W 48"W x 36"H x 6"D Faceplate: 50"W x 38"H	4.5 Ft	36280-1 36100-1 23120 36200-1 23220 36290-1 34-04-12007	Auxiliary Panel Main Control Unit Expansion Card (2 x 4) Expansion Unit (4 x 8) Expansion Card (4 x 8) Power Supply Module Battery Backup	1-2 1 1 1 1-2 2-4
CE 1	Central Equipment Single Cabinet, Surface	EXECUTONE A47445S 24"W x 36"H x 6"D	4.5 Ft	49-07-00001	M66 Block	1-2
CE ₁	Central Equipment Single Cabinet, Flush	EXECUTONE A47445W 24"W x 36"H x 6"D Faceplate: 26"W x 38"H	4.5 Ft		t en	
(NCS)	Nurse Control Station			36400-1 36470-1	Nurse Control Station Receptacle	1-1
DSS	Direct Station Selection Console			36500-1	Direct Station Selection Console	1
1	Single Patient Station	Flush-mount box with 3-gang adapter; minimum depth 3-5/16"; faceplate area: 6-3/8"W x 4-1/2"H; 2-1/2" clearance required at bottom for PCU cord	4.5 Ft	CCP1S/W43 AA38089 PCU-3	Single Patient Station 9-Pin Edge Connector 3-Button Patient Control Unit* *Entertainment/Environmental Interface Unit may be required.	1 1.2
2	Dual Patient Station	Flush-mount box with 3-gang adapter; minimum depth 3-5/16"; faceptate area: 6-3/8"W x 4-1/2"H; 2-1/2" clearance required at bottom for PCU cord	4.5 Ft	CCP2S/W43 AA38089 PCU-3	Dual Patient Station 9-Pin Edge Connector 3-Button Patient Control Unit* *Entertainment/Environmental Interface Unit may be required.	1 1-2

Table 13. CARE/COM II-E System Configuration (Continued)

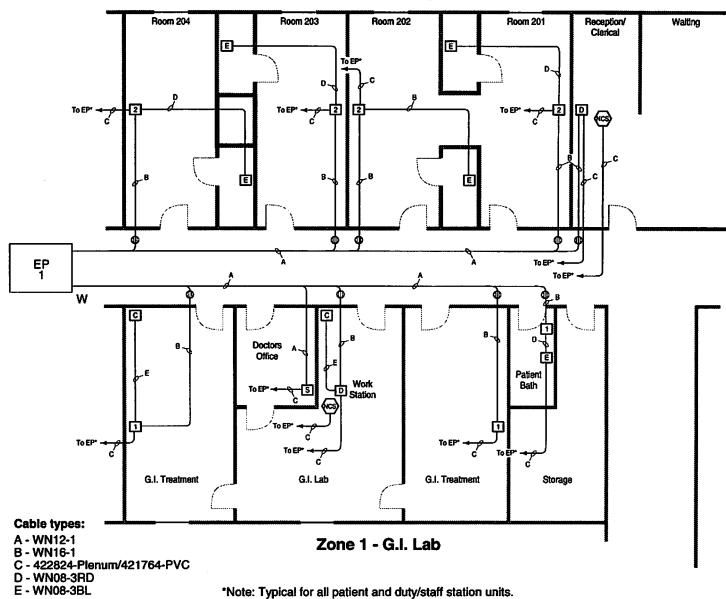
	en sul			Components Required				
Symbol	Description	Backbox Required	Mounting Height	Part Number	Model	ατγ		
1 86	Single Patient Sideguard Station	Flush-mount box with 3-gang adapter; minimum depth 3-5/16"; faceplate area: 6-3/8"W x 4-1/2"H; 2-1/2" clearance required at bottom for PCU cord	4.5 Ft	CCPCS/W43 AA38089 PCU-3	Single Patient Station 9-Pin Edge Connector 3-Button Patient Control Unit* *Entertainment/Environmental Interface Unit may be required.	3		
2 80	Dual Patient Sideguard Station	Flush-mount box with 3-gang adapter; minimum depth 3-5/16"; faceplate area: 6-3/8"W x 4-1/2"H; 2-1/2" clearance required at bottom for PCU cord	4.5 Ft	3080215 AA38642 AA39028 PCU-3	Dual Patient Station 12-Pin Edge Connector 16-Pin Edge Connector 3-Button Patient Control Unit* *Entertainment/Environmental Interface Unit may be required.	1 1 2		
s	Duty/Staff Station Staff Mode	Flush-mount box with 3-gang adapter; minimum depth 3-5/16"; faceplate area: 6-3/8"W x 4-1/2"H	4.5 Ft	CCDSS/W43 AA38089	Duty/Staff Station 9-Pin Edge Connector	1 1		
D	Duty/Staff Station Duty Mode	Flush-mount box with 3-gang adapter; minimum depth 3-5/16"; faceplate area: 6-3/8"W x 4-1/2"H	4.5 Ft	CCDSS/W43 AA38089	Duty/Staff Station 9-Pin Edge Connector	1 1		
С	Code Blue Station	4-11/16" square box with single-gang adapter; total depth of 2-7/8"	3.5 Ft	36920-1	Code Blue Station	1		
E	Emergency Station	4-11/16" square box with single-gang adapter; total depth of 2-7/8"	3.5 Ft 6.5 ft with pullcord	36900-2	Emergency Station	1		
	Dome Lamp, 4-Section	4-11/16" square box with two-gang adapter; total depth of 2-7/8"	7.5 Ft or in ceiling	MDLS/W42 30-23-01820 A44835 A44377 A44376-1W A44376-1B A44376-1R	Dome Lamp Base, Grey Lamp Lamp Socket Filler Plate White Lens Blue Lens Red Lens	1 14 14 13 13 13 13		
Z	Zone Lamp, 4-Section	4-11/16" square box with two-gang adapter; total depth of 2-7/8"	7.5 Ft or in ceiling	MDLS/W42 30-23-01820 A44835 A44377 A44376-1W A44376-1B A44376-1R	Dome Lamp Base, Grey Lamp Lamp Socket Filler Plate White Lens Blue Lens Red Lens	1 1-4 1-3 1-3 1-3 1-3		

Table 13. CARE/COM II-E System Configuration (Continued)

				Components Required				
Symbol	Description	Backbox Required	Mounting Height	Part Number	Model	QTY		
(TL1)	Single TV/Light Interface *Provides 1 audio channel	4-11/16" square box with single-gang adapter; total depth of 2-7/8"	7.5 Ft or above accessible ceiling	33920-1 15-06-50002 15-06-50008 15-06-50009	Single TV/Light Interface 2-Pin IDC Connector 8-Pin IDC Connector 9-Pin IDC Connector Strain Reliefs for each IDC Connector	1 1 1		
(TL2)	Dual TV/Light Interface *Provides 2 audio channels	4-11/16" square box with single-gang adapter; total depth of 2-7/8"	7.5 Ft or above accessible celling	33920-2 15-06-50002 15-06-50008 15-06-50009	2-Pin IDC Connector 8-Pin IDC Connector 9-Pin IDC Connector Strain Reliefs for each IDC Connector	1 1 1		
(R1)	Single Entertainment Interface	Flush-mount box with 3-gang adapter; minimum depth of 3-5/16"	1.5 Ft or above accessible ceiling	31780-2 AA38696	Single Entertainment Unit 22-Pin Edge Connector	1		
(R2)	Dual Entertainment Interface	Flush-mount box with 3-gang adapter; minimum depth of 3-5/16"	1.5 Ft or above accessible ceiling	31770-2 AA38696	Dual Entertainment Unit 22-Pin Edge Connector	1 2		
(RTV1)	Single Radio/TV Selector	Flush-mount box with 3-gang adapter; minimum depth of 3-5/16"	1.5 Ft or above accessible celling	J7376R1S/W43P AA38696	Single Radio/TV Selector Unit 22-Pin Edge Connector	1		
(RTV2)	Dual Radio/TV Selector	Flush-mount box with 3-gang adapter; minimum depth of 3-5/16"	1.5 Ft or above accessible celling	J7376R2S/W43P AA38696	Dual Radio/TV Selector Unit 22-Pin Edge Connector	1 2		
(CC1)	Single Comfort Control	Flush-mount box with 3-gang adapter; minimum depth of 3-5/16"	1.5 Ft or above accessible celling	J7377C1S/W43P AA38696	Single Comfort Control Unit 22-Pin Edge Connector	1		
(CC2)	Dual Comfort Control	Flush-mount box with 3-gang adapter; minimum depth of 3-5/16"	1.5 Ft or above accessible ceiling	J7377C2S/W43P AA38696	Dual Comfort Control Unit 22-Pin Edge Connector	1		
(RTCC)	Radic/TV Selector and Comfort Control	Flush-mount box with 3-gang adapter; minimum depth of 3-5/16*	1.5 Ft or above accessible ceiling	J7390RCS/W43P AA38696	Radio/TV Selector and Comfort Control Unit 22-Pin Edge Connector	1 2		

Figure 11. Individual Floor With One CARE/COM II-E System

Zone 2 - Ambulatory Care Room 202



*Note: Typical for all patient and duty/staff station units.

300 -

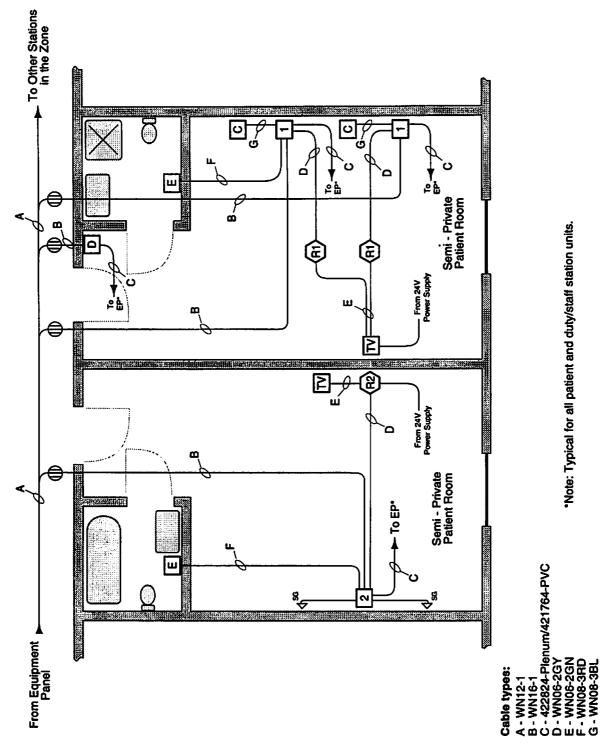


Figure 12. Individual Semi-Private Room

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Section 400 - General Installation Instructions

1. GENERAL

The EXECUTONE® CARE/COM® II-E is a nurse call system providing healthcare facilities with high quality patient care. With the advanced technology the CARE/COM II-E system offers, the installation process is very significant and must be carried out in an organized manner.

Installation of a CARE/COM II-E Nurse Call System is seldom accomplished by a routine procedure because of the uniqueness of each healthcare facility. However, each installation requires a definite approach as defined in paragraph 1.1.

Planning a system in advance of the actual installation will assure that minimum time and cost are incurred. Other benefits derived from planning the installation include: flexibility for later changes and expansion at minimum cost, and efficient maintenance when required. An effective system installation is the result of detailed planning, preparation of location and equipment, and careful coordination of the various stages of the job.

This section is designed to supplement Section 300, providing more specific guidelines for installing a CARE/COM II-E system. Carefully read the system environmental requirements and other vital information contained in Section 300 and then read Section 400 before attempting to install a CARE/COM II-E Nurse Call System.

1.1 System Installation Sequence

<u>Table 1</u> summarizes the major stages of a typical CARE/COM II-E system installation. Use the table as a guide towards planning and coordinating the work flow so that optimum use of time and labor is accomplished. For detailed information see the section indicated in the table.

<u>Paragraph 7</u> has more information, as well as tips and hints for the installation sequence.

1.2 Planning the System Installation

The basis for an efficient CARE/COM II-E Nurse Call System installation lies in careful planning. There are guidelines and general precautions that must be considered by the salesperson, as well as the installer, during the planning stages of the CARE/COM II-E system. There are certain specific requirements and limitations which, if not observed, will impair the reliability of the entire system.

Using the System Database Data Sheets

Each CARE/COM II-E installation must have a complete and accurate database on file. This database should include the system layout (configuration) on the floor plans (from the site survey) as well as all other data specific to the installation.

Appendix A includes database data sheets for keeping accurate records on a particular CARE/COM II-E system. Data sheets are used to keep track of which equipment is installed in a particular location, as well as to keep track of the system programming.

The database, along with the CARE/COM II-E technical documentation, should enable easy and efficient maintenance and troubleshooting in the future.

Using Site Survey Information

The original survey of the healthcare facility, intended for estimating the cost of a nurse call system, may not develop sufficient data to help you plan an effective installation. In addition to equipment configuration data, you need to know the location and exact dimensions of the rooms or areas allocated for equipment, as well as the length of cabling runs throughout the system.

Table 1. CARE/COM II-E Installation Sequence

Christiania recognization?

STEP	INSTALLATION STAGE	SECTION
1	Site survey and data collection. Review existing floorplans.	300
2	Plan system layout with the cable and conduit routing (include plenum cable if necessary and use corridor "J" boxes (6" x 6" x 4") above ceiling where possible).	300
3	Allow for proper backbox sizes.	300
4	Finalize documentation of system layout on plans or drawings.	300
5	Finalize the system database data sheets.	300
6	Site work: a. Verify system AC power source. b. Mount equipment cabinets, backboxes and conduit. (Use a cold water pipe for system ground if necessary.)	400 400
	c. Run station cables (maximum 12 stations per cable run).	400
	d. Install central equipment and connect to system wiring.	410
	e. Test system for shorts and ground faults with power off.	600
	f. Turn power on and perform power and voltage tests. Turn power off. g. Default system.	600 500
	h. For each nurse control station, install NCS and test for shorts with power off.	420
	i. Test system for shorts and ground faults with power off.	600
	j. Turn power on and perform power and voltage tests; configure NCSs and verify basic operation. Turn power off.	500
	k. Repeat steps h. through j. for each nurse control station.	
	1. For each cable run, connect station connectors, peripheral equipment, dome lamps and zone lamps to system wiring (using the correct methods). Do not install station units or peripheral equipment yet. Test for shorts with power off.	430, 440, & 60
	m. Set patient station and duty/staff station switches and install according to wiring diagram.	430
	n. Test system for shorts and ground faults with power off.	600
	o. Turn power on and perform power and voltage tests; then configure stations and verify basic operation. Turn power off.	600
	 p. Install stations and peripherals in backboxes (using the appropriate hardware). Test for shorts with system power off. q. Turn power on and again test basic operation. 	430, 440
	r. Repeat steps 1. through p. for each cable run in the system.	
7	Initialize system and check operation.	500
8	Customer introduction and training.	200

Equipment Locations

Remember, as stated in <u>Section 300</u>, certain locations must be avoided in regards to installing CARE/COM II-E equipment. Some locations include:

- ☐ Fluorescent fixture ballast
- ☐ Extreme ESD and RFI sources
- ☐ Wiring for other electrical systems, high voltage wiring and coaxial wiring that generates RF interference such as MATV, CATV, CCTV, broad band and pocket page (UHF, VHF, and low band)

Whatever the nature of any adverse circumstances encountered, the installer must install CARE/COM II-E equipment in locations in which none of the above factors (or other harmful factors) poses a threat to the system's performance.

2. IMPORTANT CONSIDERATIONS

Read paragraph 2.1 for important information on the system's power requirements.

2.1 System AC Power and Grounding Requirements

A DEDICATED COMPUTER GRADE 120 VOLT, 60 HZ, 15 AMP SERVICE LINE IS REQUIRED AT THE CENTRAL EQUIPMENT CABINET. The power source must be wired to the receptacles provided at the equipment and auxiliary panels. Any power source wires passing through the equipment cabinet must be enclosed in metallic conduit.

- NOTE ·

AC power must be installed in accordance with all applicable national and local codes. AC power must be connected to the healthcare facility's alternate power source as defined in NFPA 70 and NFPA 99.

The equipment panel and the auxiliary panel MUST be properly grounded. A dedicated earth ground must be provided for proper operation of the system. The grounding wire should be as short as possible, #10AWG. The wire should be connected to the chassis of the auxiliary panel, from the terminal lug to the facility's electrical service input ground.

NOTE

If a reliable earth ground is not provided by the building's electrical system, a metallic cold water pipe will provide a good earth ground in most cases. The installer should check that the cold water piping is metallic throughout and has no joints or sections of non-metallic pipe.

2.2 Fundamentals of the Power Line

The AC power source is the simplified equivalent circuit, single phase, of the electrical power distribution system. The system is designed to transfer low frequency (60Hz) power in the "normal mode" between line and neutral. The inductive resistance (XL) is low at 60Hz and the capacitive resistance (XC) is high and power can be transferred "down the line"

With high frequency energy the opposite is the case, i.e., the XL becomes large and the XC becomes small (the capacitors in the equivalent circuit approach a short). The high frequency energy now appears on both line and neutral (or in the "Common Mode") looking for a "path" to ground. This is MN to CM conversion which is taking place to rid the power system of the undesired high frequency energy. The MN to CM conversion is adequate to protect lights and motors, the traditional loads of the power system, but is destructive to computers and other modern electric equipment which has its DC logic connected to the ground where the power system is "dumping" this high frequency energy. Most power conditioning equipment approaches the power problem from the conventional (or traditional) viewpoint and functions much as the power system in controlling undesired energy.

Dirty Power Intermittent power disturbances lead to the most serious kind

of system failure: intermittent and/or false calls.

Voltage surge DC voltage which increases through a user-selected upper

limit and returns to within tolerance in less than 2.56 sec-

onds.

Voltage sag Line voltage that decreases below the user-selected lower

limit and then returns to within tolerance in less than 2.56

seconds.

Impulse Impulse disturbances represent any line perturbation which

contains frequency components in the 300Hz to 500Hz

range.

3. CENTRAL EQUIPMENT MOUNTING REQUIREMENTS

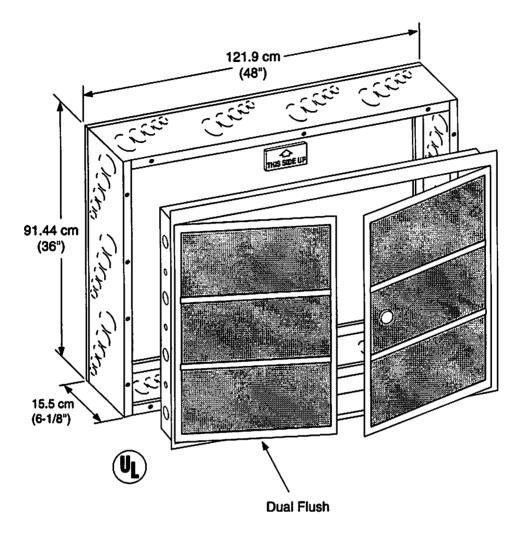
To minimize system cable requirements, the central equipment should be installed in a central location with respect to the nurse control stations and the cable groups.

A cable group consists of a group of patient stations, duty/staff stations, and peripheral equipment connected to a common cable run which is terminated at the equipment panel.

3.1 Housing the Central Equipment

The central equipment, consisting of the equipment panel (with backplane and associated hardware) and the auxiliary panel (with the Main Control/Expansion Unit), is mounted in equipment cabinets.

The rugged, metal housing and backbox are designed to protect the intricate system components and wiring. Semiconductors and other electronic components in the system are sensitive to heat, therefore, the vented doors allow air circulation to control internal air temperature. Although the system does not require special cooling considerations, adequate ventilation is required to allow circulation of air through the cabinet grills. Avoid mounting the equipment cabinet near heat generating sources, or in an area where the cabinet might possibly be blocked off. Section 300 provides more specific information on equipment cabinet configurations.



Note: Position backbox so that the two weld nuts closer to one side are located at the left hand side of backbox.

Figure 1. Backbox Used With Flush or Surface Dual Equipment Cabinet

3.2 Backboxes Used for Mounting the Equipment Cabinets

Observe proper orientation when mounting any of the single or dual equipment cabinets.

Note that the weld nuts used for mounting the equipment panel and the auxiliary panel are not located symmetrically. The cabinet must be positioned so that the two weld nuts closer to one side of the backbox are situated at the left side of the cabinet.

NOTE -	
Position backbox so that the two weld nuts closer to one side are local	ted
at the left side of the backbox.	

4. STATION UNIT MOUNTING REQUIREMENTS

CARE/COM II-E patient stations, duty/staff stations, and peripheral equipment must be mounted onto backboxes. Remember that these backboxes must be properly grounded to the equipment cabinet via #10AWG wire or continuous metallic conduit.

The type and size of backbox used for mounting each of the units in the nurse call system is based on the piece of equipment and whether the unit is wall recessed or surface mounted. Note that only metal backboxes must be used. Section 300 provides information for determining the appropriate backbox required for each model specified.

Also, refer to Section 300 for commonly used and recommended backbox mounting heights. All dimensions shown are normally measured from floor level to center of backbox.

5. WIRE AND CABLE REQUIREMENTS

A large portion of a CARE/COM II-E installation consists of connecting various equipment using cables and wires. It is very important that all wiring and cabling requirements are met. Use only the recommended type of "Approved EXECUTONE Brand" wire and cable necessary for the installation. Using the correct wire and cable will ensure proper system performance and increased reliability.

EXECUTONE will not be obligated to support or warranty or have any liability for any product/system or its performance if installed using non-approved wire and cable or any other non-approved parts or components.

EXECUTONE Brand cable has been specifically designed for the CARE/COM II-E system to assure optimum operating performance and must be used in all installations. This includes new installations and for replacing other systems with the CARE/COM II-E system.

Remember, the cables have color coded sheaths for identifying the cables coming out of a station unit backbox.

Section 300 provides more specific information on CARE/COM II-E wire and cable.

6. INSTALLATION ACCESSORY REQUIREMENTS

<u>Paragraphs 6.1 and 6.2</u> provide information on the various installation accessories used throughout the CARE/COM II-E system.

6.1 Conduit Requirements

The CARE/COM II-E Nurse Call System plays a crucial role as a healthcare communications system. It is recommended that all CARE/COM II-E system cabling be run through metallic conduit. Conduit will help prevent accidental cable damage, as well as provide increased protection from fire and EMI (ESD & RFI) sources.

If system cabling is run in an open cable tray instead of metallic conduit, all system cabling should be partitioned off from any other cables in the tray or separated to the greatest extent possible. Remember also that #10AWG wire will be required to properly ground the backboxes to the equipment cabinet.

CAUTION

System cabling must not be placed in the same pipe, conduit, or compartment containing other electrical systems, high voltage wiring, or coaxial wiring that generates RF interference such as: MATV, CATV, CCTV, broad band and pocket page (UHF, VHF, and low band).

Do not run low and high level audio lines in the same conduit.

For proper system performance, the correct conduit must be used for the cabling runs. Use the information in <u>Section 300</u> to determine the conduit size needed. System cabling must not be placed in the same pipe, conduit or compartment containing other electrical wiring.

6.2 Backbox Requirements

As mentioned previously, the type and size of backbox used for mounting each of the units in the nurse call system is based on the piece of equipment and whether the unit is wall recessed or surface mounted. (Backboxes must be metal.) Section 300 provides information for determining the appropriate backbox required for each model specified. Remember, each backbox must be UL listed and properly grounded to the equipment cabinet via #10 AWG wire or continuous metallic conduit.

Also, refer to Section 300 for commonly used and recommended backbox mounting heights. All dimensions shown are in feet, normally measured from floor level to center of backbox.

7. INSTALLATION SEQUENCE TIPS AND HINTS

Table 1 itemizes the CARE/COM II-E system's installation steps. Information also provided on AC power, central equipment mounting requirements, and cable, conduit and backbox requirements. All this information leads up to the actual installation of the CARE/COM II-E system.	is
CARE/COM II-E installation must be performed by EXECUTONE certificatechnicians.	_ d
The next several paragraphs build off of <u>Table 1</u> by providing more specific information pertaining to how the various installation steps are accomplished. Refer to the appropriate installation section for installing a particular station un or piece of equipment.	it
7.1 Installing the Equipment Cabinet, Backboxes, and Conduit	
The first portion of installing a CARE/COM II-E system consists of installing t equipment cabinets, all the backboxes, and the conduit. Installation is usually handled by the construction contractor. Once these components are installed, verify proper mounting heights, etc.	he
Avoid sharp bends in the conduit which will restrict cable pulling.	
7.2 Pulling the Cable Through Conduit	
After the equipment cabinets, the backboxes, and the conduit are installed, the system cabling needs to be pulled through the conduit.	
NOTE -	
Make sure to allow enough cabling at the central equipment location (at	'n

inches) for all terminations.

7.3 Installing the Central Equipment

Once the system cabling is in place, the central equipment needs to be installed. Section 410 has all the information required to accomplish the central equipment installation. After mounting the central equipment, terminate the system cabling according to paragraph 7.4 and: Section 420 for nurse control stations and direct station selection consoles, Section 430 for patient stations, duty/staff stations, and sideguard patient stations, Section 440 for station peripherals and peripheral equipment.

The central equipment must be installed with system power off.

7.4 Performing Cable Terminations

The next step in the installation, which is one of the most important aspects of an installation, is proper cable termination (at the central equipment and at the backboxes with the station connectors). It is essential that all connections are properly made. A few guidelines to follow are:

All cable terminations must be performed with system power off.

- a. In addition to the cable sheaths being color coded, all cables should be marked to facilitate future troubleshooting and servicing. Plan a numbering scheme so that cables and other conductors can be readily identified during subsequent wiring and servicing. Furthermore, all cables coming out of a backbox should be of adequate and equal length.
- b. All cable sheaths should be stripped using the appropriate stripping tool.

Recommended tool is Neuses Cable Sheath Stripper, part number N-2060.

c.	DO NOT strip wires that will be terminated to the IDC connectors. Only wires that will be connected via crimp connectors need to be stripped (using the appropriate stripping tool).
	nmended tools include Klein Wire Stripper-Cutter, part numbers and 11046; Ideal Wire Stripper, part number T-6.
d.	Where specified in the installation instructions, cable terminations must be made to the correct IDC connector using the correct connector tool. IDC connectors are designed only for #22AWG stranded conductors from the EXECUTONE cable.
sively must	sure that the conductor insulation has not stretched exces- from straightening out the conductors. The actual conductors make a solid contact during termination to the IDC connector. eads if necessary.
e.	All other connections need to be made using a crimp type connector and correct crimping tool.
Type \ (#14A	nmended crimp type connectors include Panduit Insulated Crimp Wire Joints, see Panduit catalog. For larger gage connections WG or larger wires), use Panduit Screw-On Wire Connectors (P-Series).
1005	nmended crimping tools include: Klein Crimping Tool, part number or 1006, Ideal Crimp Tool, part number 429, Ideal Electricians part number 30-420.
f.	
	All cables must be taped to prevent shorts between foil of cable and the backbox of the station unit.

taped back.

h.	Shield and drain wire should be insulated with a dielectric tubing, "spaghetti", type material and held in place by the cable tape.			
Recon	nmended dielectric tubing is Alpha Wire Corp. Clear PVC Tubing, umber PVC 105-18.			

- i. Data and audio wire pairs should each remain twisted to reduce the possibility of EMF interference.
- j. At the central equipment, bring in cables and conductors as close and direct as possible to the connectors for a neater installation. However, make sure to provide sufficient cable length inside the equipment cabinet to allow cable conductors to reach the furthest connecting points.
- k. When all cabling is completed, lace or tie wrap all cables to dress them down.

By adhering to these basic guidelines a CARE/COM II-E installation should be trouble free and provide for easy servicing in the future, thereby increasing overall customer satisfaction.

7.5 Testing the System Cabling

With the cabling in place and the terminations accomplished, complete and comprehensive tests need to be conducted. Testing system cabling is very important. Test for short circuits and ground faults, as well as for proper voltage and signaling. Even after conducting the first test, other tests will need to be conducted during various phases of installation (reference <u>Table 1</u>).

Refer to <u>Section 600</u> for actual testing procedures. Remember, always test the system cabling to avoid equipment damage.

7.6 Power Up and Testing

For detailed testing information, see Section 600.

- a. If not already done, check the system wiring for short circuits, grounding and reversed wiring (with system power off).
- b. Check all the power supply module connections and proper seating of cards on the backplane before turning on the power.
- c. Power up the system.
- d. Perform power and voltage tests, as well as signaling tests. With these tests completed, turn system power off.
- e. Plug the nurse control stations into their receptacles.
- f. With power off, test for short circuits and grounding.
- g. Then power up the system and test for proper voltages and operation. After testing is complete, power down the system.
 - When powering up the system, the nurse control station displays "Welcome to the CARE/COM II-E Nurse Call System". After the central equipment establishes communication with the nurse control station, the *Incoming Call Display/Function Menu* will appear.
- h. With the power off, plug the station units into their connectors. Make sure to note the correct connector designations and orientations in the installation figures.
- i. With power off, test for short circuits and grounding.
- j. Then power up the system and configure the stations to verify proper voltages and operation. See <u>Section 500</u> for Programming and <u>Section 200</u> for Operation. After testing is complete, power down the system.
- k. Next, install all the station units into their backboxes, and again test for shorts, grounding, etc.
- 1. Then power up the system and check for proper operation.

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Section 410 - Central Equipment Installation

1. GENERAL

This section provides installation instructions for installing the CARE/COM® II-E central equipment and connecting the system cabling. This specific information is to be used in conjunction with <u>Table 1 in Section 400</u>, which provides the necessary and proper installation sequence to get a system up and running safely and efficiently. When finished installing the central equipment, go back to Table 1 in Section 400 for the next step in the installation sequence.

The equipment cabinet and conduit must be installed and the system cabling must be in place prior to installing the CARE/COM II-E central equipment.

Installation of the central equipment consists of:

G	Installing the Equipment Cabinet.
0	Mounting the panel(s) and power supply module(s) with battery backup.
۵	Installing the Main Control Unit/Expansion Unit.
0	Installing the M66 Blocks.
۵	Connecting the power supply module(s).
۵	Connecting central equipment components together.
ū	Connecting the cable group common cables.
۵	Connecting the system to AC power and properly grounding.
	CAUTION

For maximum safety, perform all connections with system power off, and then test all connections according to <u>Section 600</u>.

means of pl	ug-in co		strips, c	nected to the central equipment by or punch-down blocks. The compo-
٥	Model A47094S/W (dual-width) Equipment Cabinet or A47445S/W (single-width)			
0	Model	36280-1 Auxilia	ary Pane	l (with up to twelve digital ports)
۵	Model	36100-1		ontrol Unit (4 x 8)
	Model	23120	optiona	l (2x4) expansion card
	Model	36290-1	HCP-42	Power Supply Module
			with Ba	ttery Backup (batteries not d)
	Model	34-04-12007	12V Ba	ttery (2 per power supply)
	Model	40-07-00001	M66 B1	ock for ASI, NCS, DSS
0	Model	01070-1	Female	-female 25-pair cable (1)
		em with thirteen em equipment is		digital ports, the following addi-
	Model	36200-1	Expans	ion Unit (4 x 8)
_		23220		l (4x8) expansion card
		36290-1	-	nal Power Supply Module
ū		34-04-12007		ttery (2 per power supply)
<u> </u>		40-07-00001	M66 B	• • • • • • • • • • • • • • • • • • • •
		01070-1	Female	-female 25-pair cable (3max)
a	Model	36300-1 Equipm	nent Pan	el, furnished with the following:
	o	Model 36310-1		Backplane
		Model 49-07-00	0001	M66 Block
		Model 36318-1		Ribbon Cable (2)
Required be	ut not p	rovided:		
۵	Model	CCPSM/BBS		Power Supply Module with
				Battery Backup (batteries
D	34.4.1	TIDAID ATTE		not included)
		HPNBATT		12V Battery (2)
<u>0</u>		36318-1		Ribbon Cable (1)
		49-07-00001 or		M66 Block or
_		49-07-00002		M66 Block w/RJ11
		36320-1		ASI Board with Audio Card (3 max
	Model	36340-1		Flasher Board

1.1 Installation Reminders

AND RESTREET PROPERTY.

Make sure you have read and understand <u>Sections 300</u> and <u>400</u>. These sections provide equipment requirements and other important information pertaining to installing a CARE/COM II-E system. Remember, CARE/COM II-E is the communications link between the patient and the nurse. As such, you must know the information presented in <u>Section 300</u> and <u>Section 400</u>.

Below are some important points to remember when installing CARE/COM II-E equipment.

NOTE -

CARE/COM II-E installation must be performed by EXECUTONE™ certified technicians.

- a. Before installing any equipment, inspect shipping cartons for any signs of damage. Have the delivery person note any damage found on the shipping document. When unpacking the cartons, make sure that all the necessary items are present.
- Always make sure that system power is off when performing any connections or when installing or removing a component.
- Always plan and document all phases of the installation. Also use the system data sheets for accurate record keeping.
- All cables should be marked to facilitate future troubleshooting and servicing.
- Use the correct connecting tool and crimping tool when performing all connections.
- f. Follow all notes, cautions, and warnings.

2. INSTALLING THE EQUIPMENT PANEL AND RELATED EQUIPMENT

There are two panels required in the CARE/COM II-E system; the equipment panel which mounts the backplane and associated hardware, and the auxiliary panel which mounts the Main Control/Expansion hardware. Each panel supports its own AC receptacle and power supply module with battery backup.

As <u>Figure 1</u> illustrates, the panel's surface is stamped with the letters C, D, F, H, J, K, L, and M to aid in the installation of the various equipment. Refer to Table 1 to determine the letter required for mounting specific hardware on the appropriate panel.

Table 1. Panel Designation

LETTER	PANEL	EQUIPMENT TO MOUNT
С	Auxiliary	Main Control Unit or Main Control Unit and Expansion Unit
D	Auxiliary and Equipment	M66 Blocks
F	Equipment	Model CCPSM/BBS Power Supply Module with Battery Backup
н	Auxiliary	Model 36290-1 Power Supply Module (Two used on panel when there is no Main Control Unit installed on panel)
1	Auxiliary	Model 36290-1 Power Supply Module (One used on panel when there is a Main Control Unit installed on panel)
К	Equipment	Card Retainer
L	Auxiliary	AC Receptacle
М	Equipment	AC Receptacle

2.1 Mounting the Equipment Panel on the Equipment Cabinet

KIND TO THE L

The equipment panel is furnished with the backplane, a M66 Block, and two ribbon cables already installed.

To mount the equipment panel, refer to Figure 1 and proceed as follows:

a.	The hardware consists of four (no. 5/16 x 1/2) screws and four (3/8) lockwashers, per panel. Panel mounting hardware is field supplied.		
b.	Locate the panel's four mounting holes.		
	NOTE —		
	nounting holes for the equipment panel are not identified by a sed letter.		
c.	Align the four mounting holes of the panel with the matching weld nuts on the equipment cabinet.		
đ.	Using the mounting hardware, secure the panel to the equipment cabinet		
	NOTE -		
panels	a double-width cabinet configuration, the equipment and auxiliary is are both mounted in the cabinet: the equipment panel on the right, uxiliary panel on the left. In a (2) single-width cabinet configuration, panel is mounted in each cabinet.		
	e maximum distance between the cabinet housing the auxiliary and additional equipment cabinets mounted in separate single-		

width cabinets is 1200 feet.

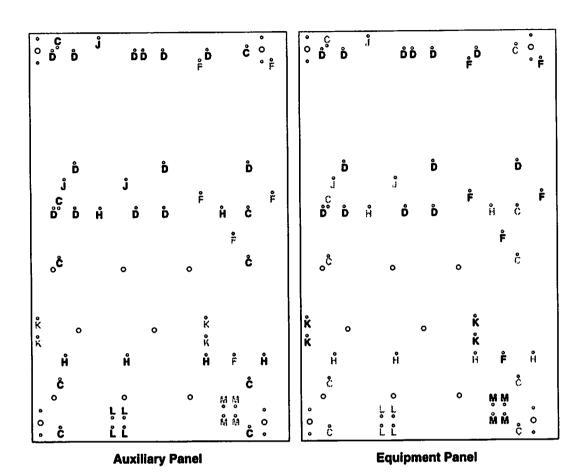
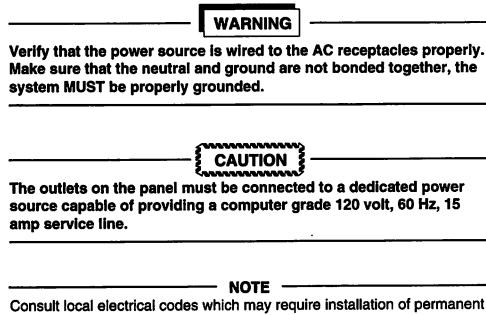


Figure 1. CARE/COM II-E Auxiliary and Equipment Panels

2.2 Mounting the AC Receptacle to the Equipment Panel

- Connect the equipment panel outlets to the AC power source.
- b. Connect the receptacles with a minimum of #14AWG wire.



Consult local electrical codes which may require installation of permanent rigid or flexible conduit from the electrical box to the AC power source.

AC power must be installed in accordance with all applicable national and local codes. AC power must be connected to the healthcare facility's alternate power source as defined in NFPA 70 and NFPA 99.

2.3 Mounting the Power Supply Module

Model CCPSM/BBS Power Supply Module and Battery Backup mount on the equipment panel.

To mount the power supply module, refer to Figure 2, and proceed as follows:

- a. The hardware consists of six (no. 6 x 3/8LG) slotted-head screws. Power supply module mounting hardware is field supplied.
- b. Locate the six pre-drilled holes on the equipment panel stamped "F" (identified in <u>Figure 1</u>): four holes to mount the power supply module, two holes to mount the battery backup.
- c. Position the power supply module on the equipment panel so that the four mounting holes on the equipment line up with the appropriate four holes on the equipment panel.
- d. Using the four screws, secure the module to the equipment panel.
- e. Position the battery backup system so that the two mounting holes on the equipment line up with the appropriate two holes on the equipment panel.
- f. Using the two screws, secure the battery backup system to the equipment panel.

At this point, the power supply module and the battery backup system are installed and ready for connections.



Do not apply power to the CCPSM/BBS Power Supply Module at this time.

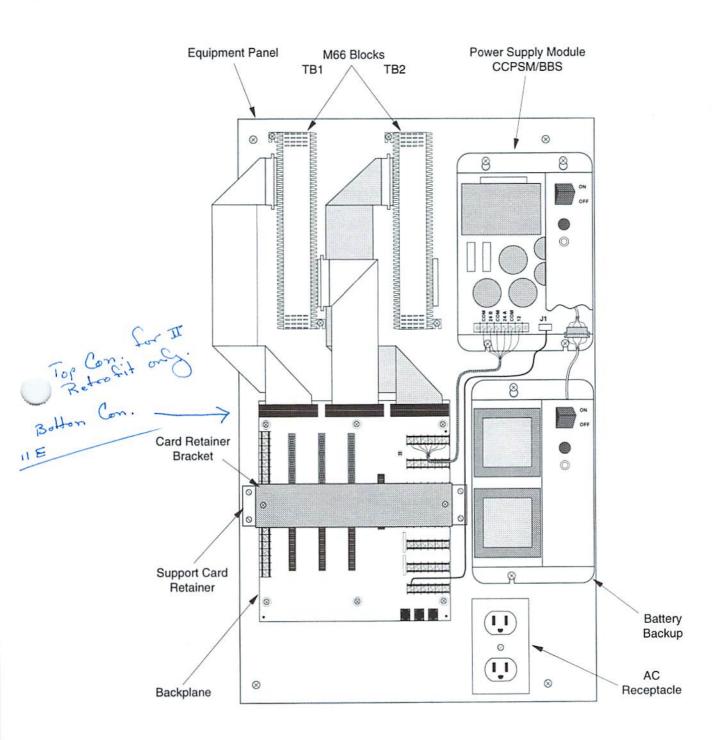


Figure 2. Equipment Mounted on the Equipment Panel (Based on 72 Station Installation)

2.4 Mounting the M66 Blocks

The punch-down, 25 pair-male 66 blocks interconnect the Analog Station Interfaces (ASIs), Nurse Control Stations (NCSs), Direct Station Selection (DSS) consoles, and patient stations in the system with the backplane and the Main Control Unit.

The equipment panel is furnished with one M66 block mounted, which supports the installation of 48 station units. An additional block can be installed to support the remaining 24 stations. Unlike the equipment panel, the M66 block for the auxiliary panel is not supplied with the panel. The block on the auxiliary panel terminates the connections for the ASIs, NCSs, and DSSs in the system.

The installation procedure for the block on either panel is as follows:

- a. Align the block with the pre-drilled holes on the panel. Refer to Figure 1 for the "D" stamped holes used for mounting the M66 block(s) on the equipment panel or auxiliary panel.
- b. Using the bracket on the top left and bottom right-hand corner of the block, secure the block to the panel with two (no. 10 x 5/8LG) slotted washer-head screws.

2.5 Installing the Basic Cards on the Equipment Panel

System power and battery backup must be off when installing/removing ASI and flasher cards.			
To install the basic cards, refer to Figures 3 and 10 and proceed as follows:			
Do not force the cards into their receptacle. Excessive pressure may cause damage to connectors or components.			

- a. Carefully insert the flasher card into the card slot at J5 on the backplane. Be sure the flasher card is installed component side to the right.
- b. Install the ASI cards in the same manner, beginning with the first card at slot A. Each ASI card has two edge connectors. The edge connectors must be inserted into the two corresponding slots on the backplane.

ASI cards are installed with the audio card piggybacked to the ASI card. Insure each ASI card is installed component side to the right.

As Figure 3 illustrates, if the audio card provides J1 and J2, J1 on the audio card must remain at the factory setting. J2 controls whether or not a beep is heard in the NCS handset which echos the call level PPM. If the audio card provides J2 and J3, J3 must remain at the factory setting. J2 controls whether or not a beep is heard in the NCS handset which echos the call level PPM.

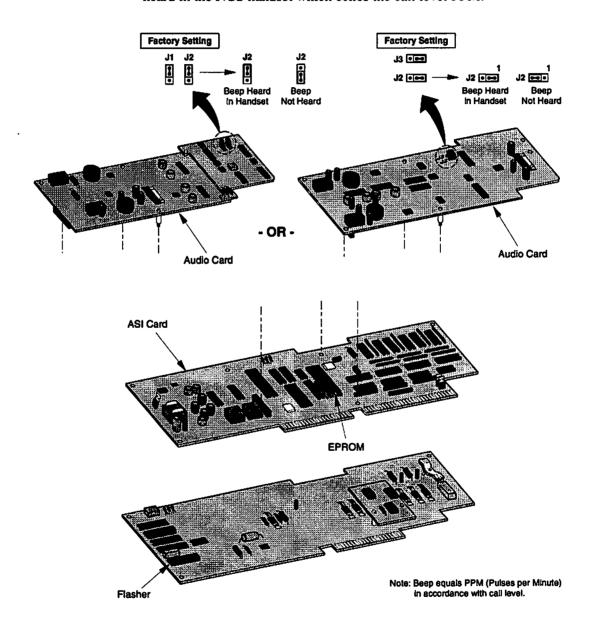


Figure 3. CARE/COM II-E Basic Cards

Installing the Card Retainer Bracket

The card retainer bracket serves as a barrier to the installed ASI and flasher cards from accidental dislodging. During manufacture, the right and left support card retainer are installed on the equipment panel. However, it will be necessary to remove and install the card retainer bracket upon card installation and removal. Reference Figure 2 for installation.



To avoid equipment damage, do not remove the ASI and flasher cards with system power on.

To remove the card retainer bracket:

 Remove the two phillips head screws securing the card retainer bracket to the left and right support card retainers. Remove the card retainer bracket.

To install the card retainer bracket:

- a. With the P.C. board guides of the card retainer bracket facing down, align the card retainer bracket with the installed cards and the mounting arms of the support card retainer.
- b. Carefully secure the ASI and flasher cards in the board guides.
- Using the two phillips head screws, secure the card retainer bracket to the left and right support card retainers.

2.6 Grounding the Equipment Panel

To ground the equipment panel, proceed as follows:

a. Connect one end of a #12AWG solid or stranded wire (green or green with yellow stripe) to the screw terminal dedicated to chassis ground on TB7 of the backplane. Connect the other end of the #12AWG wire to the terminal lug installed on the auxiliary panel.

Reference Figure 7 for a detail of TB7 and approximate terminal lug location.

3. INSTALLING THE AUXILIARY PANEL AND RELATED EQUIPMENT

The Main Control Unit, Expansion Unit, and Model 36920-1 Power Supply Module(s) are installed on the auxiliary panel(s) based on the requirements of the system. It may be necessary to install multiple panels if an Expansion Unit and additional Power Supply Module(s) are required. Refer to <u>Table 1</u> to determine the letter used for mounting specific hardware on the auxiliary panel.

a. The hardware consists of four (no. 5/16 x 1/2) screws and four (3/8) lockwashers, per panel. Panel mounting hardware is field supplied; therefore, the screws and lockwashers are shipped separately.

3.1 Mounting the Auxiliary Panel on the Equipment Cabinet

To mount the auxiliary panel, proceed as follows:

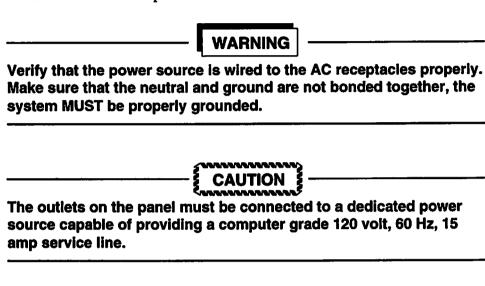
b. Locate the panel's four mounting holes.
The mounting holes for the auxiliary panel are not identified by a stamped letter.
c. Align the four mounting holes of the panel with the matching weld nuts on the equipment cabinet.
d. Using the mounting hardware, secure the panel to the equipment cabinet
NOTE -
In a double-width cabinet configuration, the equipment and auxiliary panels are both mounted in the cabinet: the equipment panel on the right, and auxiliary panel on the left. In a (2) single-width cabinet configuration, each panel is mounted in each cabinet.
☐ The maximum distance between the cabinet housing the auxiliary

panel and additional equipment cabinets mounted in separate single-

width cabinets is 1200 feet.

3.2 Mounting the AC Receptacle to the Auxiliary Panel

- a. Connect the auxiliary panel outlets to the AC power source.
- b. Connect the receptacles with a minimum of #14AWG wire.



Consult local electrical codes which may require installation of permanent rigid or flexible conduit from the electrical box to the AC power source.

NOTE

AC power must be installed in accordance with all applicable national and local codes. AC power must be connected to the healthcare facility's alternate power source as defined in NFPA 70 and NFPA 99.

3.3 Mounting the Power Supply Module

As Figure 4 illustrates, there are two typical auxiliary panel configurations. Configuration 1 mounts a Main Control Unit and Power Supply Module on one panel. This configuration can be mounted alone, in a single-width equipment cabinet, or beside the equipment panel in a double-width equipment cabinet. Configuration 2 would be used when the Main Control Unit and Expansion Unit are mounted on one panel, the required power supplies then mount on an additional panel.

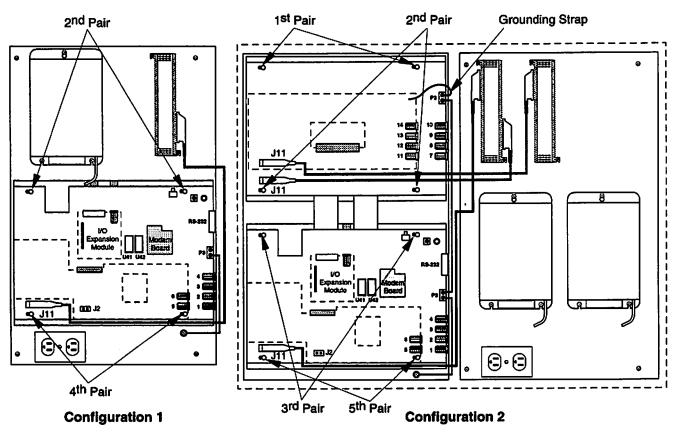
To mount Model 36290-1 Power Supply Module, proceed as follows:

- a. Locate the envelope containing the mounting hardware. The hardware consists of three screws and three washers.
- b. Locate the appropriate three holes on the panel, as referenced in <u>Table 1</u> and <u>Figure 1</u>.
- c. Position the power supply module on the auxiliary panel so that the three mounting holes on the equipment line up with the appropriate three holes on the auxiliary panel.
- d. Using the three screws and washers supplied, secure (each) module to the auxiliary panel.

At this point, the power supply module(s) are installed and ready for connections.



Do not apply power to the Model 36290-1 Power Supply Module at this time.



Note: Each 'Pair' represents the 'C' holes needed for installation of the Auxiliary Panel determined by configuration.

Figure 4. Auxiliary Panel Configuration (Main Control Unit/Power Supply Module Installation)

3.4 Mounting the Main Control /Expansion Unit

As <u>Figures 1</u> and 4 illustrate, there are five pairs of holes pre-drilled and stamped "C" provided for the mounting of the Main Control Unit.

- a. Determine the set of "C" holes needed for your installation:
 - ☐ For a Main Control Unit installation with Model 36290-1 Power Supply Module (see Configuration 1 in Figure 4), align the Main Control Unit with the second and fourth pair of C's stamped on the panel.

- ☐ For an Expansion Unit installation (see Configuration 2 in Figure 4), align the Expansion Unit with the first and second pair of C's. Align the Main Control Unit with the third and fifth pair of C's, in order to provide adequate mounting space.
- b. Secure the Main Control Unit (or Expansion Unit) to the panel with four (no. 8-32 x 3/8LG) screws.

3.5 Grounding the Auxiliary Panel

To ground the auxiliary panel, proceed as follows:

- a. Using a pre-drilled hole on the auxiliary panel, install a terminal lug.
- b. Using a #12AWG solid or stranded wire (green or green with yellow stripe), insert one end of the wire into P3 on the Main Control Unit, and secure the other end to the terminal lug, as indicated in <u>Figure 4</u>.
- c. Secure the wire in P3 by tightening the screw.

To ground an Expansion Unit, proceed as follows:

- a. Using a pre-drilled hole on the expansion panel, install a terminal lug.
- b. Using a #12AWG solid or stranded wire (green or green with yellow stripe), insert one end of the wire into the bottom hole of P3 on the Main Control Unit, and secure the other end to the terminal lug.
- c. Secure the wire in P3 by tightening the screw.
- d. Using an additional #12AWG solid or stranded wire, insert one end of the wire into the top hole of P3 on the Main Control Unit, and the other end into the bottom hole of P3 on the Expansion Unit. Secure each wire by tightening the screws.
- e. Insert the grounding strap from the (4 x 8) expansion card, into the top hole of P3 on the Expansion Unit. Secure the grounding strap in P3 by tightening the screw.

4. INSTALLING THE PROGRAMMING TERMINAL

The programming terminal can be connected to one of the system's RS-232 ports to provide facilities for system maintenance and programming. The circuitry for the built-in RS-232 Input/Output port resides in the HCP-42 Main Control Unit, as Port 1. An optional I/O Expansion module (p/n 23130) can be installed on the Main Control Unit to provide two additional I/O ports; the RS-232 at Port 2 and the RS-422 at Port 3. All three ports default to 9600 baud. To determine the type of programming terminal supported by the system, refer to Section 500.

- NOTE

Serial devices connected to port 1 or 2 may be located up to 50 feet from the equipment cabinet. A serial device connected to port 3 may be located up to 1000 feet from the cabinet.

Cables connected to the built-in I/O port and I/O Expansion module must pass through a plastic-coated 1/2 inch diameter split ferrite core before exiting the system cabinet.

The built-in RS-232 port is accessed using the DB-25 connector located on the right-hand corner of the Main Control Unit, or the top of the Expansion Unit. This RS-232 port is configured as a DCE.

DB-25 connector	
Pin 2	_Receive from terminal
Pin 3	_Transmit to terminal
Pin 5	_CTS *
Pin 6	_DSR *
Pin 7	_Ground
Pin 20	DTR

^{*} These 2 pins are available if a particular printer requires them.

On the Expansion Module, the RS-422 port is accessed using the 6-pin modular connector.

Pin 1	Signal Ground
Pin 2	TX-
Pin 3	RX-
Pin 4	RX+
Pin 5	TX+
Pin 6	no connection

Wiring a Programming Terminal (RS-232)

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a. Using a cable with pins 2 and 3 reversed, and pin 7 straight through (as seen in Detail A of <u>Figure 5</u>); connect one end to the DB-25 connector on the Main Control Unit or Expansion Module at port 2, and the other end to the AUX connector on the back of the terminal.

NOTE -

It is important to place the RS-232 cable into the AUX jack located on the back of the operator's terminal. If the connector is placed in the MODEM jack, the terminal appears to function, however, it does not transmit proper characters.

Wiring a Programming Terminal (RS-422)

- a. Install a 6 or 8-wire station cable within 5 feet of the equipment cabinet.
- b. Connect the terminal end of the station cable to a 6-wire modular station jack.
- c. Connect the end of the cable near the cabinet to a 6-wire modular station jack as well. This connecting block is wired in a non-standard manner, as follows:

White/Blue to Red Blue/White to Green White/Orange to Yellow Orange/White to Black White/Green to Blue Green/White to White

- d. Plug the DB-25 end of the cable into the MODEM port of the terminal. Plug the modular end of the cable into the 6-wire modular station jack.
- e. Connect a standard 6-conductor modular mounting cable to the RS-422 at port 3. Plug the other end of the cable into the station jack.

Ν	O	T	E

Cables connected to the I/O Expansion Module must pass through a plastic-coated 1/2 inch diameter split ferrite core before exiting the equipment cabinet.

Once the terminal is wired and functioning, it is then necessary to check the programming. The programming of the terminal setup is shipped RS-422. To make certain of the setup, proceed as follows:

- a. Turn the power switch located on the right side of the terminal to the ON position. The screen of the terminal should first appear reverse video with all stars, and then appear blank with a cursor in the upper left corner of the screen.
- b. Press CONTROL and SETUP (ICM) keys simultaneously. The terminal enters the setup mode.
- c. Press the right directional arrow key twice until DEFAULT ALL is highlighted.
- d. Press F10. The terminal setup menu appears with EXIT highlighted.
- e. Press the right directional arrow key twice until SAVE ALL is highlighted.
- f. Press F10. The terminal is now ready for RS-422 operation.

If the terminal is connected to port 1 or 2, the programming of the terminal setup must be converted from RS-422 to RS-232. To convert, proceed as follows:

- a. If not already on, turn the power switch located on the right side of the terminal to the ON position. The screen of the terminal should first appear reverse video with all stars, and then appear blank with a cursor in the upper left corner of the screen.
- b. Press **CONTROL** and **SETUP** (ICM) keys simultaneously. The terminal enters the setup mode.
- c. Press F2. PERSONALITY=OPT'S TERM should be highlighted. If not, press the SPACE BAR until OPT'S TERM appears.
- d. Press the down directional arrow key twice. DATA/ PRINTER=MODEM/AUX is highlighted.
- e. Press the space bar. DATA/PRINTER=AUX/MODEM is highlighted.
- f. Press F4.
- g. Move the cursor to AUX RCV HANDSHAKE.
- h. Press the space bar until NONE is displayed.

Central Equipment Installation

i. Move the cursor to AUX XMT HNDSHAKE.

Satisfaction of the first of

- j. Press the space bar until NONE is displayed.
- k. Press F10. The terminal setup menu appears with EXIT highlighted.
- 1. Press the right directional arrow key twice. SAVE ALL is highlighted.
- m. Press F10.

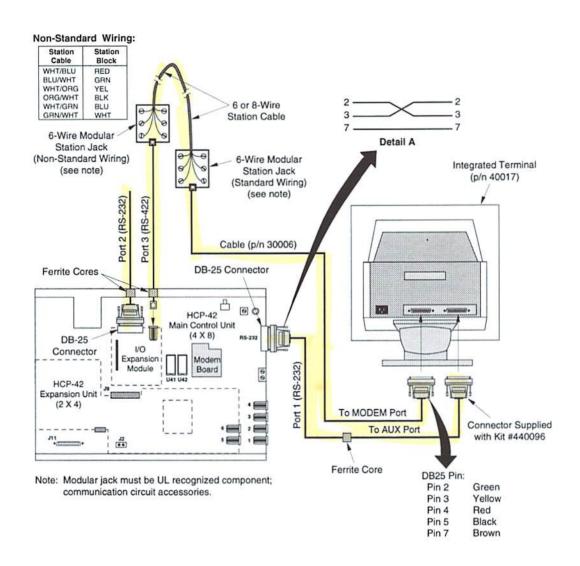


Figure 5. Wiring the Programming Terminal

5. INSTALLING A POWER SUPPLY FOR ENTERTAINMENT /ENVIRONMENTAL INTERFACE

Entertainment/environmental interfaces in the CARE/COM II-E system are powered by the Model M-217/4101 Power Supply set for 24 volts. Note that this power supply can provide either +12 volts or +24 volts as provided by a jumper.

The M-217/4101 Power Supply can be mounted near the equipment panel, or it can be mounted remotely, closer to the device which provides power. To mount the M-217/4101 Power Supply, select a suitable location in accordance with the following information, and then proceed with step a.

In order to remain in accordance with UL; the power supply must be mounted in a location convenient to the system power supply, using a UL recognized enclosure having provisions for conduit connection to the AC input. The M-217/4101 Power Supply must plug into a UL listed receptacle mounted within the enclosure.

- a. Locate the envelope containing the mounting hardware. The hardware consists of two bracket bars and two slotted hex head screws which must be ordered separately.
- b. Position the power supply as desired and mark holes for drilling. Drill holes.
- c. Using one bracket and screw for each end of the power supply, mount the power supply.
- d. Set the jumper for 24 volts per Figure 6.



Do not apply power to the M-217/4101 Power Supply at this time.

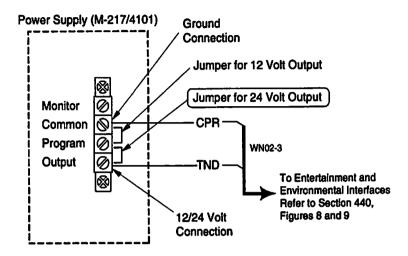


Figure 6. 24 Volt Power Supply Connections and Jumper Setting

6. CONNECTING COMPONENTS IN THE CENTRAL EQUIPMENT

The following information, and <u>Figure 7</u>, details the connections within the central equipment.

6.1 Connecting the Power Supply Modules to the Panels

Before proceeding to connect the power supply modules to the equipment panel and auxiliary panel, check the system wiring for short circuits and reversed wiring. Although each model has been designed to withstand abnormal conditions, equipment may sustain permanent damage if powered up with reversed wiring or short circuits incurred during the process of installation.

Connecting Model 36290-1 Power Supply Module to the Main Control Unit

- a. Using the cable provided with the power supply module, connect the molex connector to the power supply module.
- b. On the same cable provided, connect the IDC connector to J17 on the Main Control Unit.

NOTE
NOTE
The CCPSM/BBS Power Supply Module shall maintain system power
during the healthcare facility power transfer from main power to alternate
power source as specified in NFPA 70 and NFPA 99.

Connecting Model CCPSM/BBS Power Supply Module to the Backplane

- a. Perform the wiring (as shown in <u>Figure 7</u> and <u>Figure 11</u>) from the power supply module to TB1 on the backplane.
- b. Proceed to connect the battery backup system components.

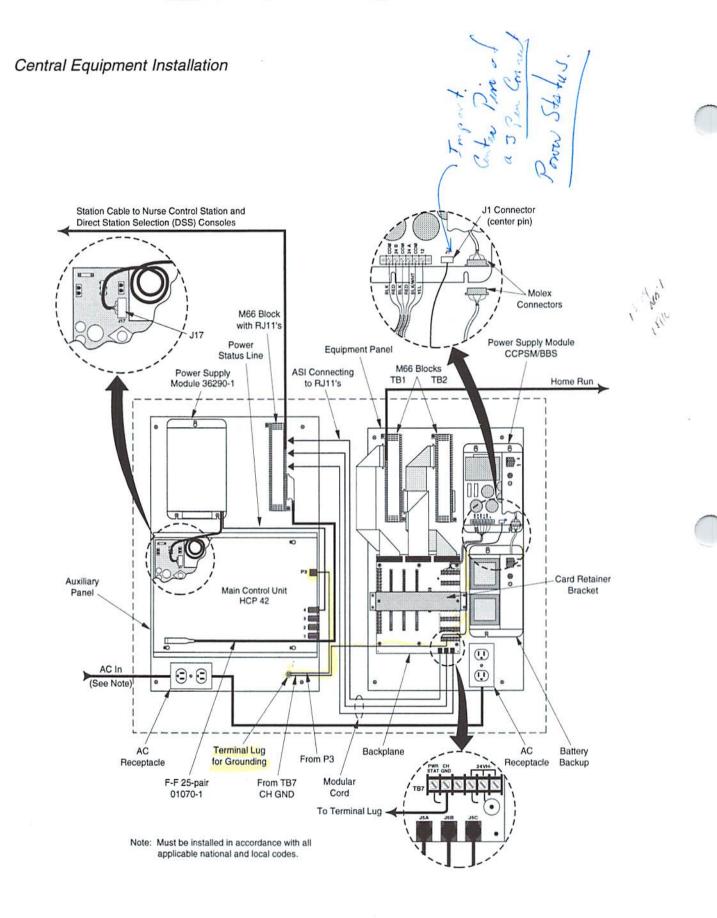


Figure 7. Central Equipment Connections - Tyical System

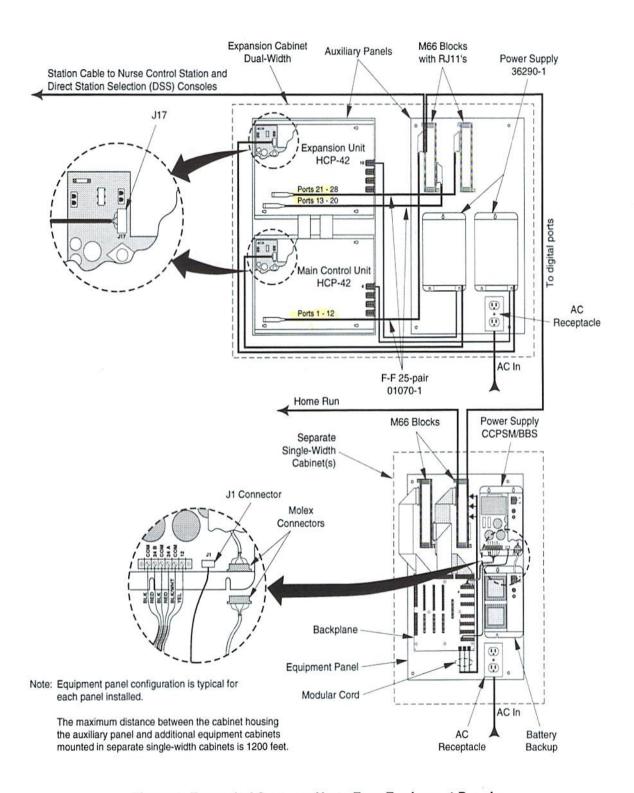


Figure 8. Expanded System - Up to Four Equipment Panels

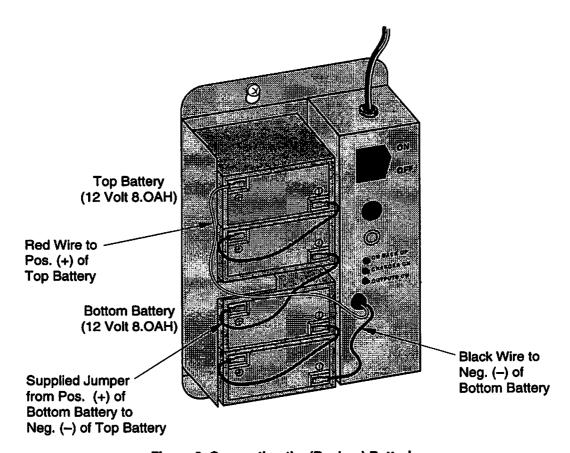


Figure 9. Connecting the (Backup) Batteries

Battery Backup Connections

To connect battery backup to the power supply module:

a. Connect the male molex connector on the battery backup to the female molex connector mounted internally on the power supply module (Figure 7).

To connect battery backup to the backplane:

- a. With the field-provided cable, connect the female IDC connector to the male IDC connector at J1 (center pin) on the power supply module.
- b. Secure the opposite end of the cable to the screw terminal labeled PWR STAT located at TB7 on the backplane (refer to Figure 10).

Connecting the (Backup) Batteries

The connections for the battery backup portion of the power supply module(s) are rather basic. Two wires, carrying +24 volts and ground, provide the power supply module with battery backup. Refer to Figure 9 for details.

6.2 Connecting the M66 Blocks to the Backplane

Ribbon cables are required to connect the blocks to the backplane. Each cable is terminated with a 50-pin connector.

- a. Fold the first ribbon cable as shown in <u>Figure 7</u>. Place the folded cable flat against the equipment panel, and as close as possible to TB1. Connect the top connector of the ribbon cable to the left side of TB1, and the bottom connector to inside connector J2A on the backplane (<u>Figure 10</u>).
- b. Fold the second ribbon cable as indicated in <u>Figure 7</u>. Place the folded cable flat against the equipment panel, between TB1 and TB2. Connect the top connector of the ribbon cable to the right side of TB1, and the bottom connector to inside connector J2B on the backplane (<u>Figure 10</u>).
- c. If a third cable is required, fold the third ribbon cable as indicated in <u>Figure 7</u>. Place the folded cable flat against the equipment panel, between TB1 and TB2. Connect the top connector of the ribbon cable to the left side of TB2, and the bottom connector to inside connector J2C on the backplane (<u>Figure 10</u>).

6.3 Connecting the ASIs to the M66 Block

Each backplane on the CARE/COM II-E system supports three ASI (Analog Station Interfaces) cards and modular cords. Remember, an ASI supports 24 station units; three ASIs are required to support 72 total station units per backplane. When the modular cord from the backplane is connected to the M66 block, the analog system is able to communicate with the digital system, and audio is provided to the stations controlled by the ASIs.

To connect the ASIs on the equipment panel with the M66 block on the auxiliary panel, refer to Figure 7 and proceed as follows:

- a. Plug one end of the modular cord (RJ11 connector) into J5A, J5B, or J5C (for ASI1, ASI2, and ASI3 respectively) on the backplane.
- b. Plug the opposite end of the modular cord (RJ11 connector) into the RJ11 "smack pack" on the right side of the M66 block on the auxiliary panel.

NOTE ·

If the modular cord is not plugged into the J5 slot on the backplane, the corresponding ASI card will not function.

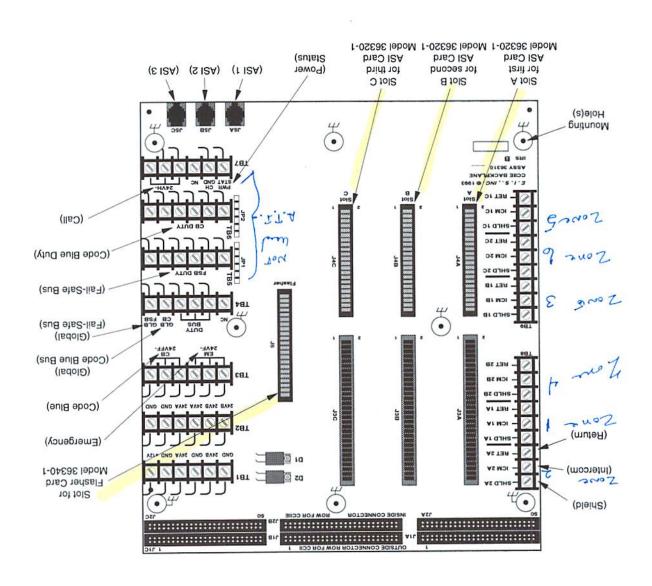


Figure 10. CARE/COM II-E Backplane

Connecting ASIs Not Installed in the Same Cabinet

In the event the equipment panel and auxiliary panel are not installed in the same dual-width equipment cabinet, it is necessary to install station connecting block(s) to connect the ASIs to the M66 block. This procedure is also used if the M66 block does not contain a RJ11 "smack pack". To connect an ASI to a station connecting block, proceed as follows:

- a. Install station connecting block(s) within the cabinet housing the auxiliary panel.
- b. Route the 4-pair station cable (p/n 422824 plenum, or 421764 PVC) from the station connecting block to the right side of the M66 block.
- c. Connect the appropriate wire from the 4-pair station cable to each of the D clips in the sequence illustrated in <u>Figure 11</u>.
- d. Insert the bridging clips on clips C and D.
- e. Connect the RJ11 connector from the ASI modular cord to the station connecting block.

6.4 Connecting the Power Supply Power Status Line

The power status line is separate, yet integrated into the design of the cable provided with the power supply module. Since the molex connector was connected previously, the only action required is to plug the RJ11 connector into a CO jack. To plug the connector into the jack, proceed as follows:

a. Plug the RJ11 connector from the power supply into the required RJ11 CO jack. COs are designated as 1 - 4 (located on the Main Control Unit), 5 and 6 (on the 2 x 4 expansion card), 7 - 10 (on the 4 x 8 Expansion Unit), and 11 - 14 (on the 4 x 8 expansion card), identified in Figure 4.

NOTE

○ On an Expansion Unit; COs 1 - 6 are designated for the main power supply module and COs 7 - 14 are designated for the expansion power supply module. If the expansion power supply is plugged into CO (1 - 6) the power supply will not be recognized in the event of a service indication regarding battery status.),
If the connector is plugged into the default CO 04, no programming required to recognize the connection. If the connector is plugged into a CO other than the default CO, the CO occupied must be identified in Additional System Programming, Section 500.	is

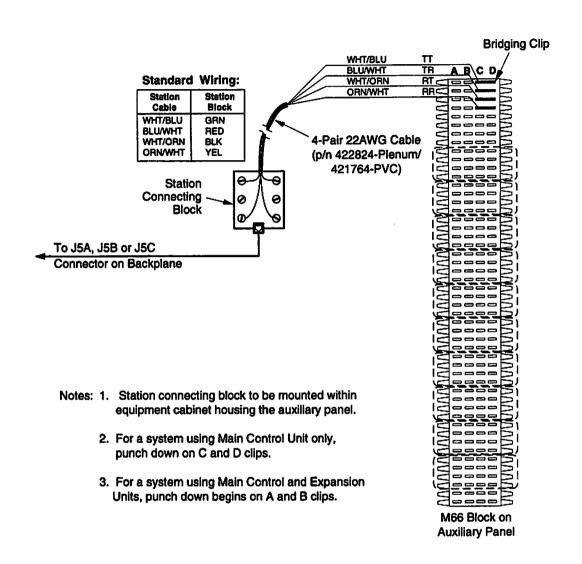


Figure 11. Connecting ASIs to a Station Connecting Block

7. CONNECTING THE NCS AND DSS TO THE CENTRAL EQUIPMENT

Nurse Control Stations and Direct Station Selection (DSS) consoles connect to the M66 block on the auxiliary panel. Typically, there are 12 sets of four bridging points (on each side of the M66 Block) used for wiring the NCS or DSS. If the M66 Block utilizes a RJ11 "Smack Pack" on the right side, the 16 bridging points parallel to the 4 ports on the block would not be used. Instead, the modular cord with an RJ11 connector would plug directly into the RJ11. As Figure 12 illustrates, the 4-pair cable (p/n 422824 - plenum, 421764 - PVC) connects the station connecting block or NCS receptacle to the M66 block.

	connecting block or NCS receptacle to the M66 block.
a.	Route the 4-pair cable from the station connecting block or NCS receptacle to the left side of the M66 block on the auxiliary panel.
	tation cable from the station connecting block or NCS receptacle to exiliary panel should not exceed 1200 feet.
b.	Connect the white/blue, blue/white, white/orange, and orange/white lead from the 4-pair cable to each of the A column clips in the sequence illustrated in <u>Figure 12</u> .
c.	Insert the bridging clips on clips A and B.
d.	Repeat steps a c. for each NCS or DSS to be connected.
	NOTE
block,	connecting the leads from the station cable to the right side of the be sure the lead attaches to the D column clips in the same see described in step b.

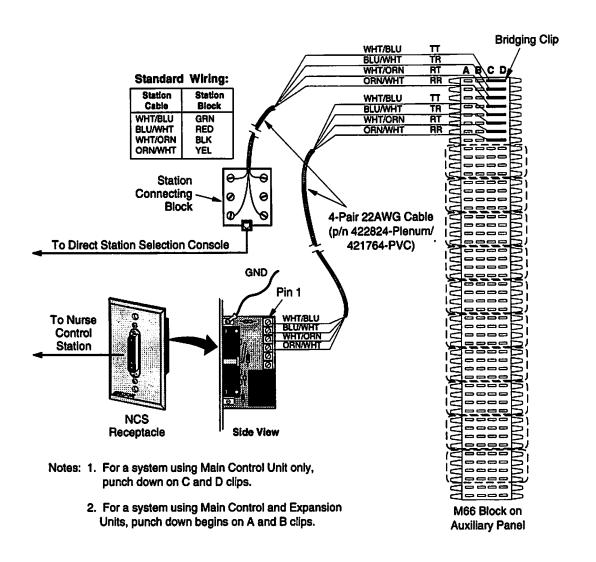


Figure 12. Connecting the Station Connecting Block to the M66 Block

8. CONNECTING CABLE GROUPS AND HOME RUNS

There are two basic types of cable runs originating from the central equipment: common cable run, and a home run to each patient or duty/staff station in the system.

A maximum combination of 72 annunciation points may be connected to an equipment panel. These station units are connected to the equipment panel in a configuration consisting of up to six common cables. Each common cable run can support a maximum of 12 annunciation points. In addition to the common cable, each station requires an individual home run cable connected to the central equipment.

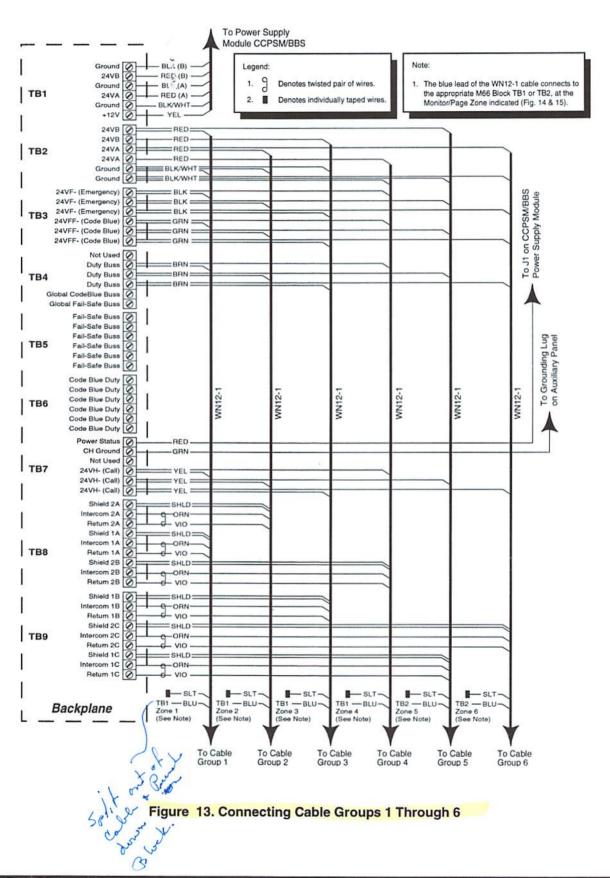
8.1 Connections for the Cable Groups at the Backplane

The WN12-1 cables from the cable groups are connected to various locations on the equipment panel per <u>Figures 13</u>, <u>14</u> and <u>15</u>. To connect the cable groups, refer to the appropriate figure and proceed as follows:



Do not perform any connections with the system power on.

- a. Route the WN12-1 common cable runs from cable groups 1 6 down the left side of TB1. Dress the cables to the right so that they occupy the space between the bottom of the terminal block(s) and the top of the backplane.
- Route the red, green, black, black/white, orange, yellow, violet, brown, and both shield wires to the appropriate terminal block on the backplane.
 Attach the lead to the appropriate screw terminal (identified in <u>Figure 13</u>) and secure.
- c. Connect the blue lead of the WN12-1 cable to the appropriate M66 Block TB1 or TB2 at the monitor/page zone indicated in Figures 14 and 15. Using Model S814 Impact Tool, punch down the violet lead on the A or D clip required. Install a bridging clip between clips A and B or C and D.
- d. Cap off the slate lead of the WN12-1 cable.
- e. Repeat steps b., c. and d. for each of the cable groups in accordance with Figures 13, 14, and 15.



8.2 Connections for the Home Run Wires on the M66 Blocks TB1 and TB2

The connectorized M66 terminal blocks are provided to terminate the home run wiring for the station units. Each connectorized block has 50 rows of four clips. The four clips in each row are divided into two sets of two. The two clips in the left half of the row are designated A and B, the two clips on the right half are designated C and D. Figures 14 and 15 illustrate the control/annunciate designation for each station unit.

- a. Route the 4-pair (p/n 422824 plenum, 421764 PVC) home run wires from station units 1 24 down the left side of M66 Block TB1.
- b. Terminate the white/brown lead of the home run wire on the clip designated "CTL", and the brown/white lead on the clip designated "ANN" in the "A" column.
- c. Using Model S814 Impact Tool, punch the leads down on the clips indicated.
- d. Insert the bridging clip on clips A and B.

NOTE -

The last two set of clips are used for punching down the blue lead of the WN12-1 cable to provide paging/monitoring functions. Refer to <u>paragraph</u> 8.1 for more instructions on connecting the WN12-1 cable leads.

Zones 1 - 6, indicated in <u>Figure 13</u>, are not related to the external page zones, which connect to the Main Control Unit/Expansion Unit(s).

- e. Repeat steps b. d. for stations 25 48 on the right side of M66 Block TB1, however, the white/brown and brown/white lead from the home run wires terminate on the "D" clip column.
- f. Repeat steps b. d. again for stations 49 72 on the left side of M66 Block TB2. Terminate the white/brown and brown/white lead on the "A" clip column as indicated in Figure 15.

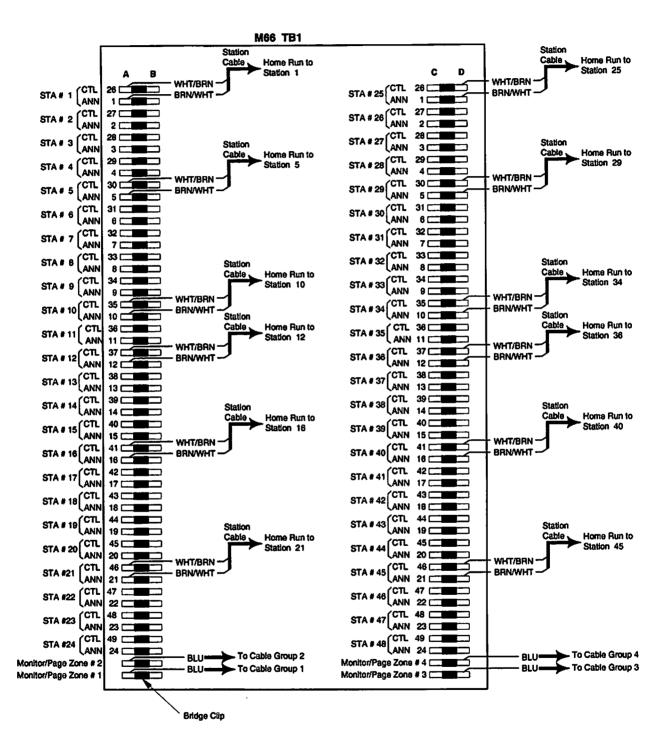


Figure 14. Connections of Home Run Wires on M66 Block TB1

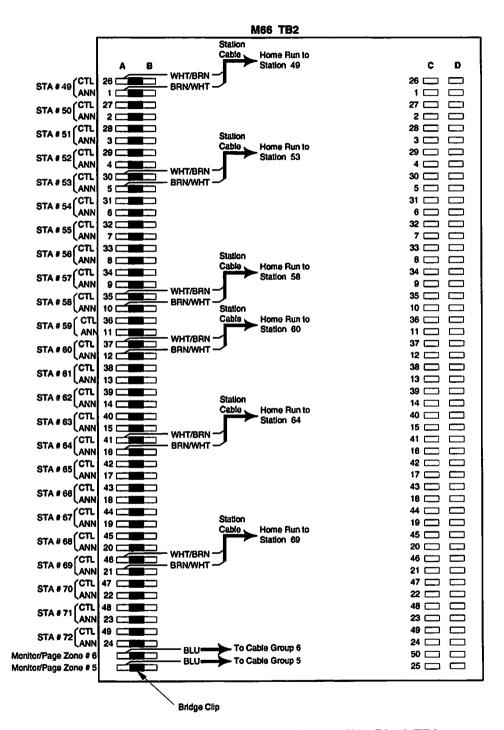


Figure 15. Connections of Home Run Wires on M66 Block TB2

9. CONNECTING THE MAIN CONTROL/EXPANSION UNIT AND EXTERNAL PAGING AMPLIFIERS

Each Main Control and Expansion Unit must be connected to the M66 Block on the auxiliary panel to provide the following: power, digital ports and COs (designated for power status and modem connections), and external paging amplifiers.

9.1 Connections for the External Paging Amplifiers and Amphenol Connectors

Reference Figure 16 for the connections at the Main Control and Expansion Unit.

Connecting the Main Control Unit Only

NOIE
Red and green are provided as an example of the wiring which can be
used for external paging. Any combination of two leads can be used,
provided the same two leads are consistently used for wiring each exter-
nal paging amplifier.

To provide external paging zone 1:

- a. Connect the red lead of the WN02-4GY cable to the D clip at row 49 of the M66 Block. Install a bridging clip between clips C and D.
- b. Connect the green lead of the WN02-4GY cable to the D clip at row 50 of the M66 Block. Install a bridging clip between clips C and D.

To provide digital ports 1 - 12 and COs 1 - 6:

c. Connect the female-female 25-pair amphenol connector from the M66 block to the PC board-mounted connector at J11 on the Main Control Unit.

To provide external paging zone 2:

d. Connect the red and green lead of the WN02-4GY cable to J2, located on the (2x4) expansion card.

Connections for the Main Control and Expansion Unit

To provide external paging zone 1:

- a. Connect the red lead of the WN02-4GY cable to the A clip at row 49 of the M66 Block (1). Install a bridging clip between clips A and B.
- b. Connect the green lead of the WN02-4GY cable to the A clip at row 50 of the M66 Block (1). Install a bridging clip between clips A and B.

To provide digital ports 1 - 12 and COs 1 - 6:

c. Connect the amphenol connector from the left side of M66 Block (1) to the amphenol connector at J11 on the Main Control Unit.

To provide external paging zone 2:

d. Connect the red and green lead of the WN02-4GY cable to J2, located on the (2x4) expansion card.

To provide external paging zone 3:

- e. Connect the red lead of the WN02-4GY cable to the D clip at row 49 of the M66 Block (1). Install a bridging clip between clips C and D.
- f. Connect the green lead of the WN02-4GY cable to the D clip at row 50 of the M66 Block (1). Install a bridging clip between clips C and D.

To provide digital ports 13 - 20 and COs 7 - 10:

g. Connect the amphenol connector from the right side of the M66 Block to the amphenol connector at J11 on the (4 x 8) expansion board.

To provide external paging zone 4:

- h. Connect the red lead of the WN02-4GY cable to the A clip at row 49 of the M66 Block (2). Install a bridging clip between clips A and B.
- i. Connect the green lead of the WN02-4GY cable to the A clip at row 50 of the M66 Block (2). Install a bridging clip between clips A and B.

To provide digital ports 21 - 28 and COs 11 - 14:

j. Connect the amphenol connector from the left side of the M66 Block to the amphenol connector at J11 on the (4 x 8) expansion card.

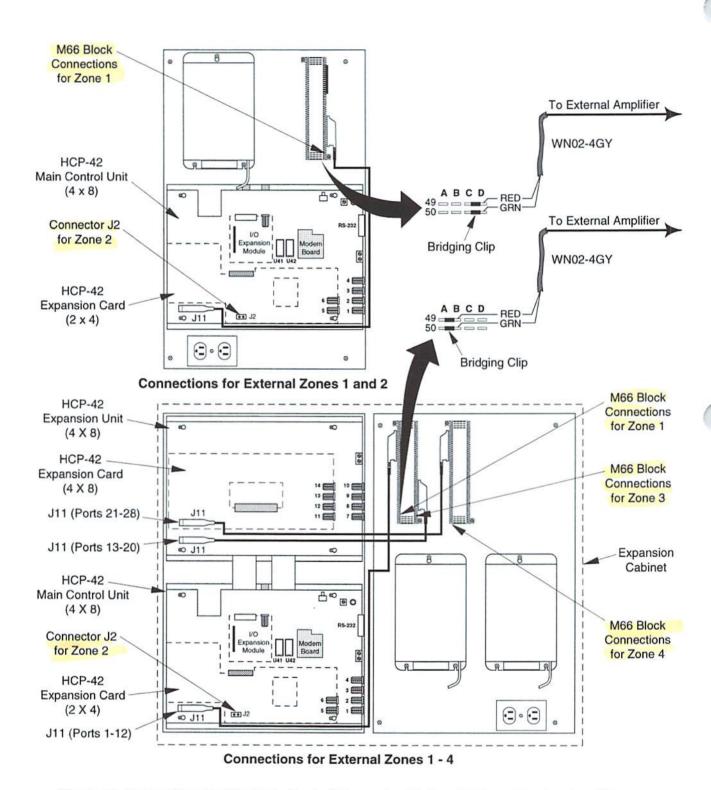


Figure 16. Connections for the Main Control/Expansion Unit and External Paging Amplifiers

10. CENTRAL EQUIPMENT POWER ON - SYSTEM VERIFICATION

Once central equipment component connections have been completed, perform the following visual tests with power on to verify the system is functioning.

10.1 Verifying Switch/Jumper Settings

when each

Reference Table 2. to determine if switch and jumper settings are set properly.

Table 2. Central Equipment Switch/Jumper Settings

LOCATION	SWITCH/JUMPER	POSITION
Main Control Unit	SW1	1-ON, 2-ON, 3-OFF, 4-OFF
ASI Card	J2	See Figure 3
Flasher Card	Switch 1	Factory Setting - Off

och - Factory outland. Not went att.

10.2 Verifying ASI/Flasher Card LEDs

Reference <u>Tables 3</u> and <u>4</u> to verify ASI and flasher cards are functioning in accordance with LED status.





Table 3. Flasher Card LED Status

DS	1 - CPU Status LED
120 PPM	CPU Alive
Not Blinking	CPU Inactive
DS	2 - Code Blue Status
Idle	LED OFF
Code Blue	120 PPM - 250 ms ON, 250 ms OFF
DS	3 - Emergency Status
Idle	LED OFF
Call	1 second ON, 5 seconds OFF
Emergency .5 second ON, .5 second OF	

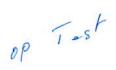




Table 4. ASI Card LED Status

	CPU ST	ATUS LED
DS3	Idle	250 ms ON, 250 ms OFF
DS3	Flasher PIC error	50 ms ON, 750 ms OFF
DS3	KSU error	50 ms ON, 100 ms OFF 50 ms ON, 60 ms OFF
	Zone 1 (S	tations 1 - 12)
DS2	Idle	OFF
DS2	Code Blue	250 ms ON, 250 ms OFF
DS2	Emergency	500 ms ON, 500 ms OFF
DS2	Patient Call	1 second ON, 5 seconds OFF
DS2	Connected Call (Talk Mode)	Bright
DS2	Connected Call (Listen Mode)	Dim
	Zone 2 (St	ations 13 - 24)
DS1	Same as Zone 1; re DS2.	eference DS1 rather than

Contents

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	1.1 Installation Reminders	420 - 1
2.	Connecting the Nurse Control Station	420 - 3
	Connecting the Direct Station Selection (DSS) Console	

Section 420 - Nurse Control Station Installation

1. GENERAL

This section provides installation instructions for connecting the CARE/COM® II-E nurse control station (NCS). This specific information is to be used in conjunction with <u>Table 1 in Section 400</u>, which provides the necessary and proper installation sequence to get a system up and running safely and efficiently. When finished installing the nurse control station(s), go back to Table 1 in Section 400 for the next step in the installation sequence.

The system cabling at the equipment cabinet must be in place prior to installing the CARE/COM II-E nurse control stations.

Installation of each nurse control station is as simple as plugging the connector into the specially designed receptacle.

Each nurse control station is connected to the system cabling by means of a connector to the NCS receptacle. The NCS receptacle is permanently terminated to the system cabling. The desk unit NCS requires no backboxes or other hardware. Here is the equipment covered in this section:

Model 36400-1Murse Control StationModel 36470-1NCS Receptacle

1.1 Installation Reminders

Make sure you have read and understand <u>Sections 300</u> and <u>400</u>. These sections provide equipment requirements and other important information pertaining to installing a CARE/COM II-E system. Remember, CARE/COM II-E is the communications link between the patient and the healthcare provider.

•	NOTE -
0	off analog and for duty made SHOLILD be installed adjacent to

One duty/staff station set for duty mode SHOULD be installed adjacent to each nurse control station.

CARE/COM II-E installation must be performed by EXECUTONE certified technicians.

- a. Before installing any equipment, inspect shipping cartons for any signs of damage. Have the delivery person note any damage found on the shipping document. When unpacking the cartons, make sure that all the necessary items are present.
- b. Always plan and document all phases of the installation. Also use the system database data sheets for accurate record keeping.
- c. All cables should be marked to facilitate future troubleshooting and servicing.
- d. Use the correct connecting tool and crimping tool when performing all connections.
- e. Follow all notes, cautions, and warnings.

2. CONNECTING THE NURSE CONTROL STATION

The nurse control station is provided with an eight foot cord terminated with a connector. Each NCS connects to the system by inserting the connector in the specially designed NCS receptacle. The NCS receptacle is permanently terminated to the central equipment.

The NCS is a desk unit, no backboxes or other hardware is required.

To connect the nurse control station, refer to Figure 1 and proceed as follows:

- a. Plug one end of the NCS cable into the back of the NCS.
- b. Plug the other end of the NCS cable into the NCS receptacle.

Once a NCS is plugged in, the message "Executone Information Systems Proudly Presents CARE/COM II-E" will display on the LCD as system power is initiating.

power is initiating.	
NOTE	
It is not necessary to shut off system power when	installing a NCS.

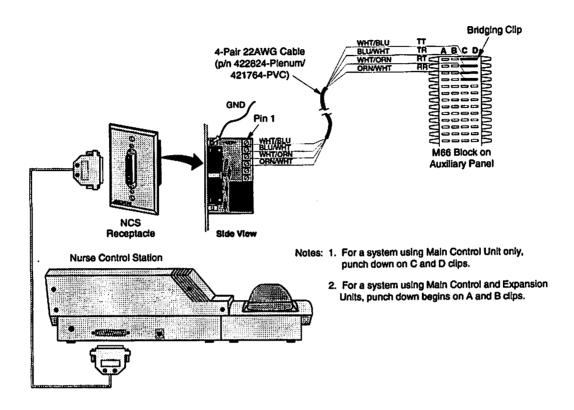


Figure 1. Connections for a Nurse Control Station

3. CONNECTING THE DIRECT STATION SELECTION (DSS) CONSOLE

The 48-key Direct Station Selection (DSS) console is optional equipment, used in conjunction with the NCS. Up to two DSSs can be associated with an NCS.

Like the NCS, the DSS is a desk unit, no backboxes or other hardware is required. Here is the equipment covered in this section:

☐ Model 36500-1 Direct Station Selection (DSS) Console

Each DSS console connects to the cabling from the central equipment. The DSS then plugs into a station connecting block using a silver satin cord with RJ11 connectors.

To connect the DSS console to the station connecting block, refer to <u>Figure 2</u> and proceed as follows:

- a. Plug one end of the silver satin cord into the bottom of the DSS console.
- b. Plug the other end of the silver satin cord into the station connecting block.

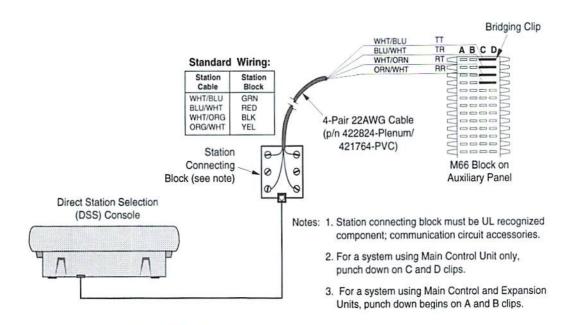


Figure 2. Connections for a Direct Station Selection (DSS) Console

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Section 430 - Station Unit Installation

1. GENERAL

This section provides installation instructions for connecting and mounting CARE/COM® II-E patient and duty/staff stations. This specific information is to be used in conjunction with <u>Table 1 in Section 400</u>, which provides the necessary and proper installation sequence to get a system up and running safely and efficiently. When finished installing the station units, go back to Table 1 in Section 400 for the next step in the installation sequence.

The backboxes and conduit must be installed and the system cabling must be in place prior to installing the CARE/COM II-E station units.

Installation for each station basically consists of:

ū	Connecting the system cabling and peripheral cables to the station unit.
0	Setting station switches.
a	Mounting the station on the backbox.



For maximum safety, perform all connections with system power off, and then test all connections according to <u>Section 600</u>.

Each station is connected to the system cabling by means of edge connector assemblies which are installed on the station unit. The station unit is then mounted on the required backbox. The plug-in connectors are permanently terminated to the system cabling. Here are the stations covered in this section:

u	Model CCPIS/W43	Single Patient Station
Ö	Model CCP2S/W43	Dual Patient Station
	Model CCPCS/W43	Single Patient Sideguard Station
	Model 3080215	Dual Patient Sideguard Station
	Model CCDSS/W43	Duty/Staff Station

1.1 Installation Reminders

Make sure you have read and understand <u>Sections 300</u> and <u>400</u> . These sections
provide equipment requirements and other important information pertaining to
installing a CARE/COM II-E system. Remember, CARE/COM II-E is the
communications link between the patient and the nurse.

CARE/COM II-E installation must be performed by EXECUTONETM certified technicians.

- a. Before installing any equipment, inspect shipping cartons for any signs of damage. Have the delivery person note any damage found on the shipping document. When unpacking the cartons, make sure that all the necessary items are present.
- b. Always make sure that system power is off when performing any connections or when installing or removing a station unit.
- c. Always plan and document all phases of the installation. Also use the system database data sheets for accurate record keeping.
- d. All cables should be marked to facilitate future troubleshooting and service.
- e. Use the correct connecting tool and crimping tool when performing all connections.
- f. Follow all notes, cautions, and warnings.

2. SINGLE AND DUAL PATIENT STATIONS - MODELS CCP1S/W43, CCP2S/W43

These two station models install similarly; they require the same edge connector assembly and are wired alike as detailed by the following paragraphs.

All connections to the patient stations are made via the edge connector assembly. These connectors install on the station unit at the position indicated in <u>Figure 5</u>.

Any combination of single and dual patient stations can be installed in one room. When several patient stations are installed in a multiple bed room, one of the stations is connected to the system common cabling. This station is then connected to the other stations in the room by cable running from station to station. If one or more dual patient stations are used in a ward room (sharing a common annunciator), install a 10K ohm resistor between P1 - 2 (+24 volts) and P1 - 8 (Annunciate) on each patient station in the ward room.

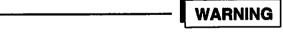
For installation, the following connectors are required for each single or dual station:

One AA38089 Nine Pin Edge Connector: for patient station to system
cabling connection.

One additional AA38089 Nine Pin Edge Connector: for entertainment
connections.

2.1 Connecting Patient Station(s) in a Room

To connect the station(s), refer to Figure 1 and proceed as follows:



DO NOT perform any connections with system power on.

- a. The common cabling is spliced in the dome lamp backbox.
- b. Connect all the SHLD wires for the common run cables together at each station. Do not connect the SHLD wire to any of the station connectors.
 At each station, insulate the SHLD wire using quality tape and dielectric tubing ("spaghetti" type) to prevent grounding.
- c. Connect the common cabling to the (WN16-1) drop cable in the dome lamp backbox.

- d. Connect the drop cable to the color coded wires of the 9-pin edge connector.
- e. Connect the home run from the central equipment to the 9-pin edge connector.
- f. Connect the necessary wires from the WN16-1 cable to the dome lamp in the lamp configuration (1, 2, or 3 lamp installation) desired. Reference Figures 1, 2, and 3.
- g. If connecting more than one patient station(s) in a room, install a 10K ohm resistor between P1 2 (+24 volts) and P1 8 (Annunciate) on each patient station in the ward room.
- h. Connect each additional patient station in the room in parallel using WN16-1.
- i. If required, connect code blue and/or emergency stations with the appropriate WN08-3 cable, as seen in <u>Figures 2</u> and <u>3</u>. Refer to <u>Section 440</u> when installing two emergency devices associated with a patient station.

NOTE -

Do not cut off unused cable wires; all unused wires must be individually capped off and isolated from possible ground faults.

- j. DO NOT plug station connectors onto the station unit at this time.
 - ☐ If required, refer to Section 440 to connect the patient station to entertainment and environmental interfaces.
 - ☐ If not connecting entertainment and environmental interfaces to the patient station, test the wiring for shorts, etc.
- k. Once wire connections are fully tested, proceed to <u>paragraph 2.3</u> to set station switches.

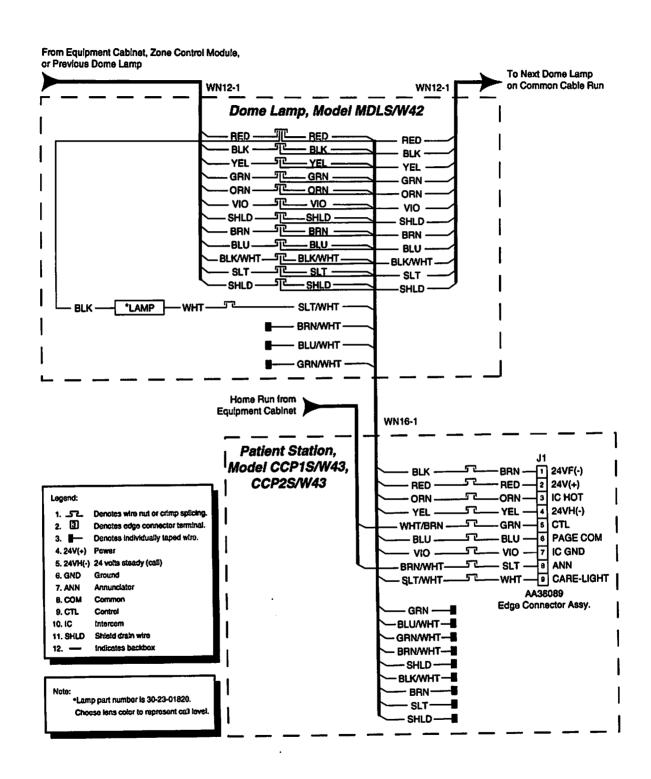


Figure 1. Connections for a Single or Dual Patient Station

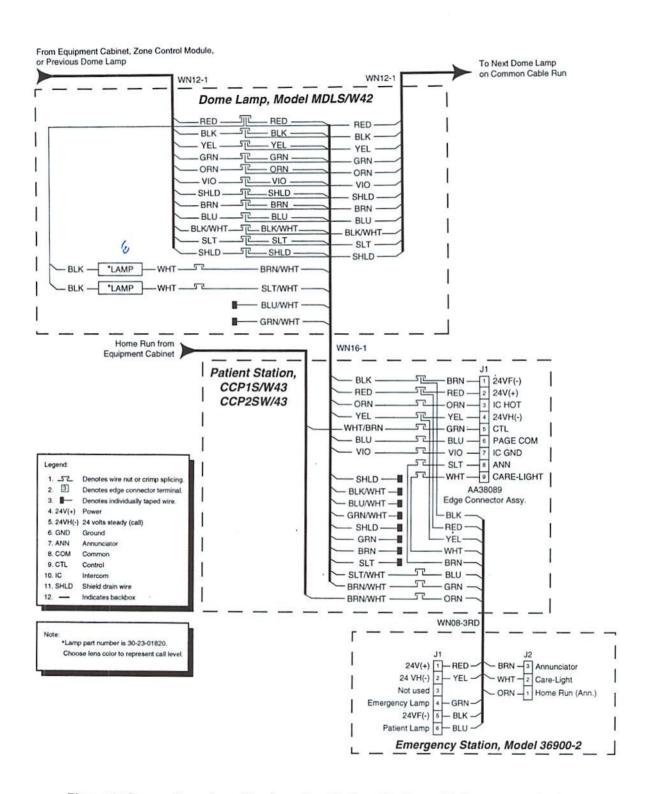


Figure 2. Connections for a Single or Dual Patient Station with Emergency Station

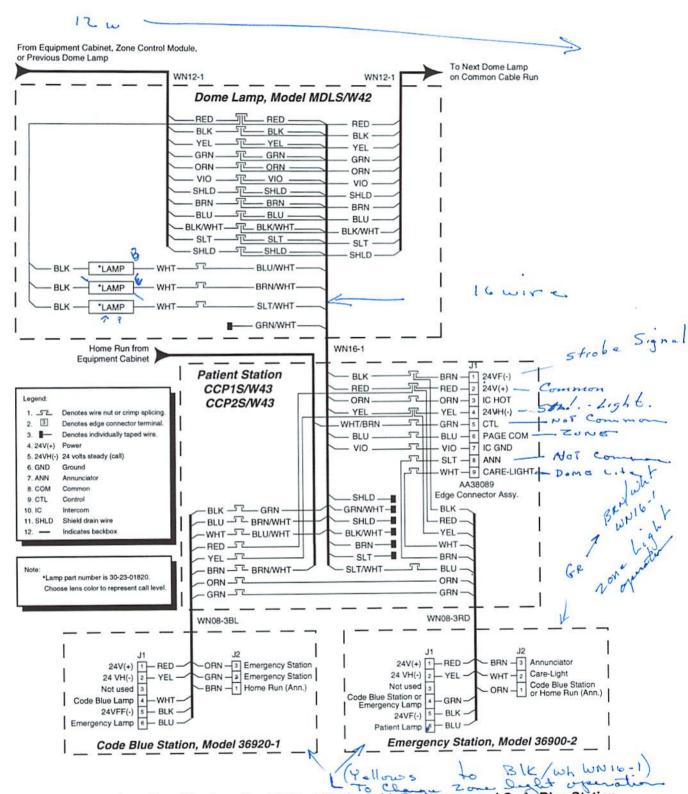


Figure 3. Connections for a Single or Dual Patient Station with Emergency and Code Blue Station

2.2 Connecting a Patient Station to a Radio/TV Selector

When providing a radio/TV selector for entertainment control at a patient station, an additional 9-pin edge connector is required. Furthermore, a single patient station requires a run of WN08-3 cable between the station and the radio/TV selector, and a dual patient station requires a parallel run of WN08-3 and WN05-1 cables between the station and the radio/TV selector.

Model PCU-3 three-button Patient Control Unit is used in conjunction with the patient station for remote operation of the radio/TV selector.



DO NOT perform any connections with system power on.

To connect the radio/TV selector, refer to Figure 4 and proceed as follows:

- a. Connect the WN08-3 cable from the radio/TV selector unit to the appropriate 9-pin edge connector for the single or dual patient station.
- b. For dual stations, connect the WN05-1 cable from the radio/TV selector unit to the 9-pin edge connector.
- c. DO NOT plug station connectors onto the station unit at this time.
 - ☐ Test the wiring for shorts, etc.
- d. Once wire connections are fully tested, proceed to <u>paragraph 2.3</u> to set station switches.

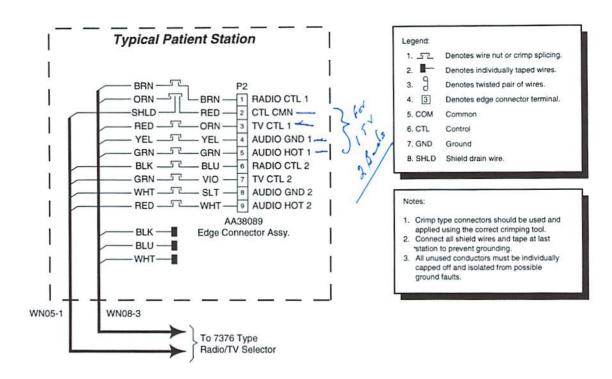


Figure 4. Connecting a Patient Station to Radio/TV Selector

2.3 Setting Patient Station Switches

Each single or dual patient station contains a switch on the main PCB which must be set before the station is mounted. The operation mode switch (SW2) is not externally accessible once the station is mounted.

Switch 2 determines the type of call. Each station has the option of originating an emergency call or a normal call when the call origination device is removed from its receptacle. For the mode of operation, the switch is set accordingly, as <u>Figure</u> 5 illustrates.

a. Set SW2 on the main PCB as follows:

Towards the relay (to the inside) to originate a normal call. Away from the relay (to the outside) to originate an emergency call.

2.4 Mounting a Patient Station to the Backbox

Before plugging in the connectors, make sure the system cabling has been fully tested per <u>Section 600</u>. Also, make sure the backbox for the station unit is UL listed and properly grounded to the equipment cabinet via #10AWG wire or continuous metallic conduit.

Before mounting a patient station onto the backbox, do the following:

- a. Check the operation mode switch for proper setting.
- b. Plug connectors onto the station unit with system power OFF.
- Make sure all connectors are fully inserted.
- d. Check all terminations for loose connections.
- e. Test all wiring and connections with station connectors plugged in.
- Once fully tested with station connectors plugged in, dress all cables and installation wires against each side of the backbox.

To install a single and dual patient station, refer to <u>Figure 5</u> and proceed as follows:

- a. Using the four nylon screws provided, loosely attach the station to the backbox.
- b. Adjust the station to obtain proper level.
- c. Tighten the four nylon screws.



Do not overtighten the nylon screws to avoid stripping the threads.

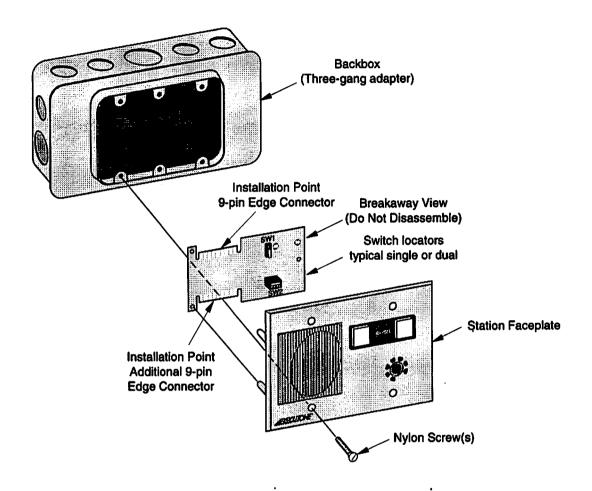


Figure 5. Mounting a Single or Dual Patient Station

3. SINGLE AND DUAL SIDEGUARD PATIENT STATION - MODELS CCPCS/W43 AND 3080215

All connections to the patient stations are made via connector assemblies (must be ordered, not provided with station). These connectors install on the station unit at the position indicated in <u>Figure 6</u>.

For installation, the following connectors are required for each single sideguard station:

☐ Three AA38089 Nine Pin Edge Connectors: connect patient station to common cabling and home run wires.

For installation, the following connectors are required for each dual sideguard station:

- One AA38642 Twelve Pin Edge Connector: connect patient station to common cabling and home run wires.
- Two AA39028 Sixteen Pin Connector Assemblies: connect the station to the bed receptacle assembly kits.

3.1 Connecting the Single Sideguard Patient Station

WARNING

DO NOT perform any connections with system power on.

- a. The common cabling is spliced in the dome lamp backbox.
- b. Connect all the SHLD wires for the common run cables together at each station. Do not connect the SHLD wire to any of the station connectors. At each station, insulate the SHLD wire using quality tape and dielectric tubing ("spaghetti" type) to prevent grounding.
- c. Connect the common cabling to the (WN16-1) drop cable in the dome lamp backbox.
- d. Connect the drop cable to the color coded wires of the 9-pin edge connector.
- e. Connect the home run from the central equipment to the 9-pin edge connector.

- f. Connect the necessary wires from the WN16-1 cable to the dome lamp in the lamp configuration (1, 2, or 3 lamp installation) desired. Reference Figures 1, 2, and 6.
- g. If required, connect code blue and/or emergency stations with the appropriate WN08-3 cable, as seen in <u>Figure 6</u>. Refer to <u>Section 440</u> for peripheral equipment installation.
- h. Connect a length of WN05-1 cable from the P2 nine-pin edge connector to the Radio/TV Selector.
- i. Connect the receptacle assembly kits to the patient station nine-pin edge connectors P2 and P3.

NOTE —
Do not cut off unused cable wires; all unused wires must be individually
capped off and isolated from possible ground faults.

- j. DO NOT plug station connectors onto the station unit at this time.
 - ☐ If required, refer to Section 440 to connect the patient station to entertainment and environmental interfaces.
- k. Once wire connections are fully tested, proceed to <u>paragraph 3.3</u> to mount a sideguard station to the backbox

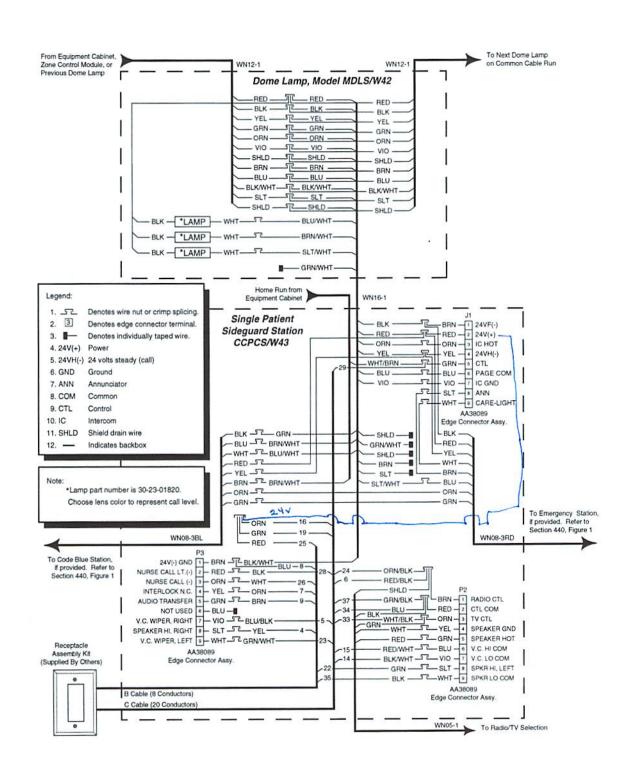


Figure 6. Connections for a Single Patient Sideguard Station

3.2 Connecting the Dual Sideguard Patient Station

N	O NOT perform any connections with system power on.		
a.	The common cabling is spliced in the dome lamp backbox.		
b.	Connect all the SHLD wires for the common run cables together at each station. Do not connect the SHLD wire to any of the station connectors. At each station, insulate the SHLD wire using quality tape and dielectric tubing ("spaghetti" type) to prevent grounding.		
c.	Connect the common cabling to the (WN16-1) drop cable in the dome lamp backbox.		
d.	Connect two home run wires from the central equipment to the 12-pin edge connector for the home run.		
e.	Connect the necessary wires from the WN16-1 cable to the dome lamp in the lamp configuration (1, 2, or 3 lamp installation) desired. Reference Figures 1, 2, and 7.		
f.	Connect WN08-3 cable from each 16-pin connector to the Radio/TV Selector.		
g.	Connect each receptacle assembly kit to the patient station connectors (P2A and P2B).		

h. DO NOT plug station connectors onto the station unit at this time.

capped off and isolated from possible ground faults.

- ☐ If required, refer to Section 440 to connect the patient station to entertainment and environmental interfaces.
- i. Once wire connections are fully tested, proceed to <u>paragraph 3.3</u> to mount a sideguard patient station to the backbox.

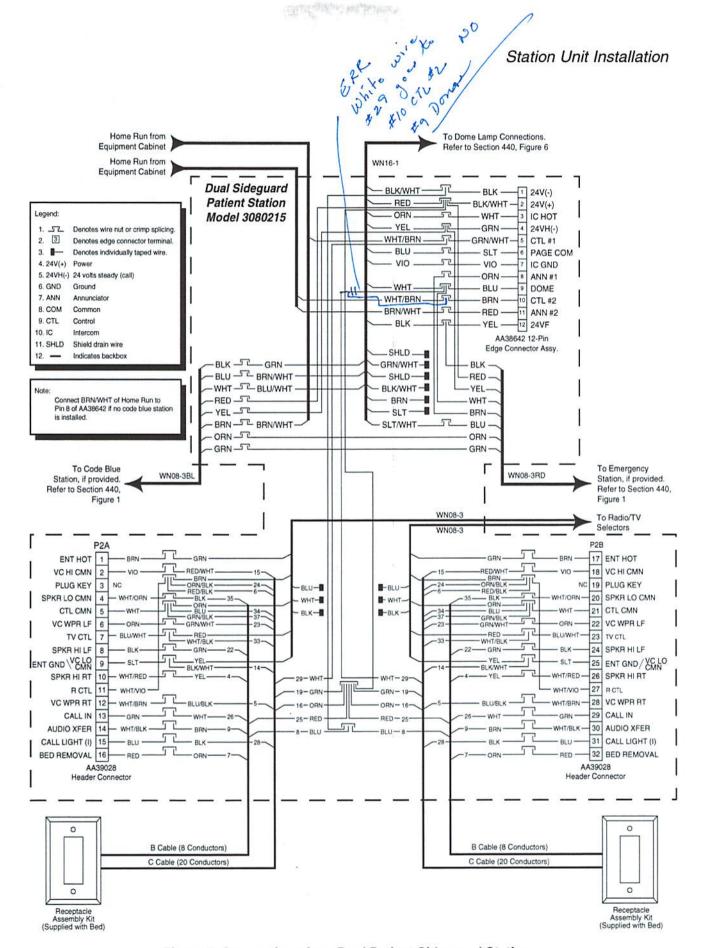


Figure 7. Connections for a Dual Patient Sideguard Station

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3.3 Mounting a Sideguard Station to the Backbox

Before plugging in the connectors, make sure the system cabling has been fully tested and the backbox for the station unit is UL listed. Properly ground the station using #10AWG wire or continuous metallic conduit.

- a. Plug connectors onto the station unit with system power OFF.
- b. Check all terminations for loose connections.
- c. Test all wiring and connections with station connectors plugged in.
- d. Once fully tested with station connectors plugged in, dress all cables and installation wires against each side of the backbox.

To install a sideguard patient station, refer to Figure 8 and proceed as follows:

- a. Using the nylon screws provided, loosely attach the station to the backbox.
- b. Adjust the station to obtain proper level.
- c. Tighten the four nylon screws.



Do not overtighten the nylon screws to avoid stripping the threads.

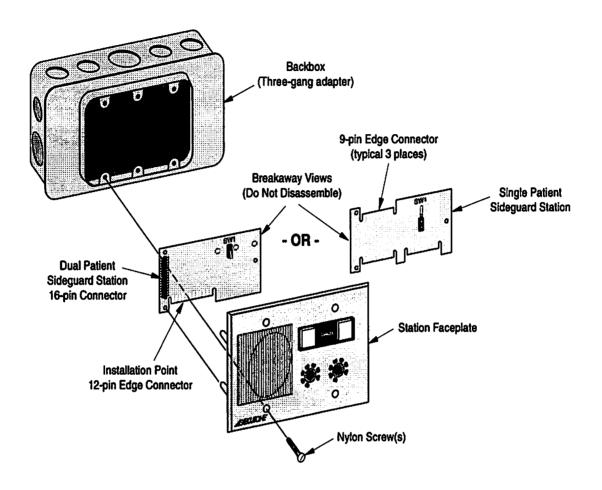
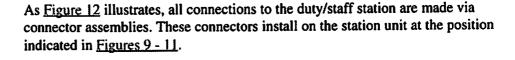


Figure 8. Mounting a Single or Dual Patient Sideguard Station

4. DUTY/STAFF STATION - MODEL CCDSS/W43



One duty/staff station set for duty mode SHOULD be installed in each cable group as well as adjacent to each nurse control station.

For installation, the following connectors are required for each duty/staff station:

One AA38089 Nine Pin Edge Connector: for duty/staff station to system cabling connection.

4.1 Connecting the Duty/Staff Station

WARNING

DO NOT perform any connections with system power on.

- a. The common cabling is spliced in the station backbox.
- b. Connect all the SHLD wires for the common run cables together at each station. Do not connect the SHLD wire to any of the station connectors. At each station, insulate the SHLD wire using quality tape and dielectric tubing ("spaghetti" type) to prevent grounding.
- c. Connect the common cabling to the (WN16-1) drop cable in the dome lamp backbox.
- d. Connect the drop cable to the color coded wires of the 9-pin edge connector.
- e. Connect the home run from the central equipment to the 9-pin edge connector.
- f. Connect the necessary wires from the WN16-1 cable to the dome lamp in the lamp configuration (1, 2, or 3 lamp installation) desired. Reference Figures 9, 10 and 11.

	WARNING	
DO NOT perform any connections with system power on.		

g. If required, connect code blue and/or emergency stations with the appropriate WN08-3 cable as seen in <u>Figures 10</u> and <u>11</u>. Refer to <u>Section 440 (Figure 2)</u> when installing two emergency devices associated with a duty/staff station.

Do not cut off unused cable wires; all unused wires must be individually capped off and isolated from possible ground faults.

- h. DO NOT plug station connectors onto the station unit at this time.
 - ☐ Test the wiring for shorts, etc.
- i. Once wire connections are fully tested, proceed to <u>paragraph 4.2</u> to set the station switch.

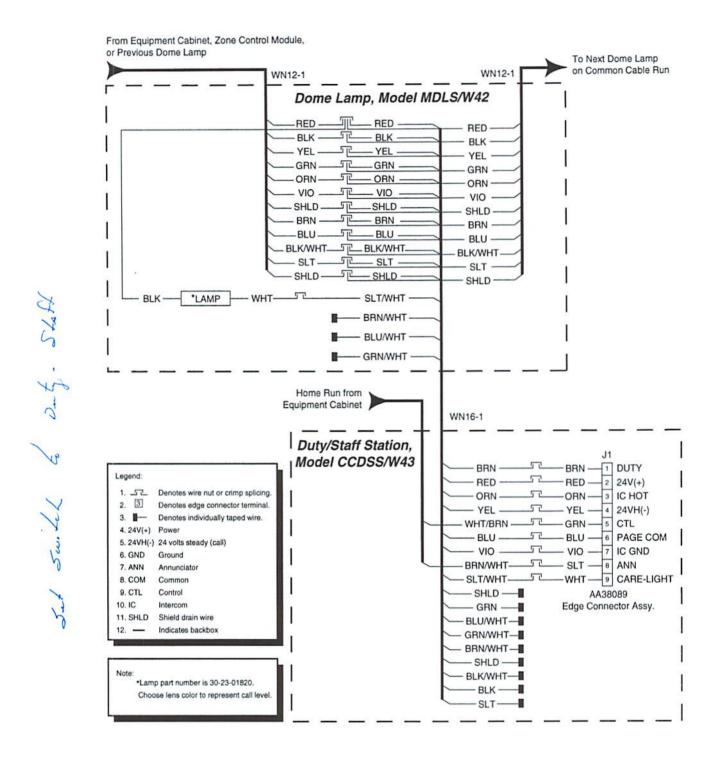


Figure 9. Connections for a Duty/Staff Station

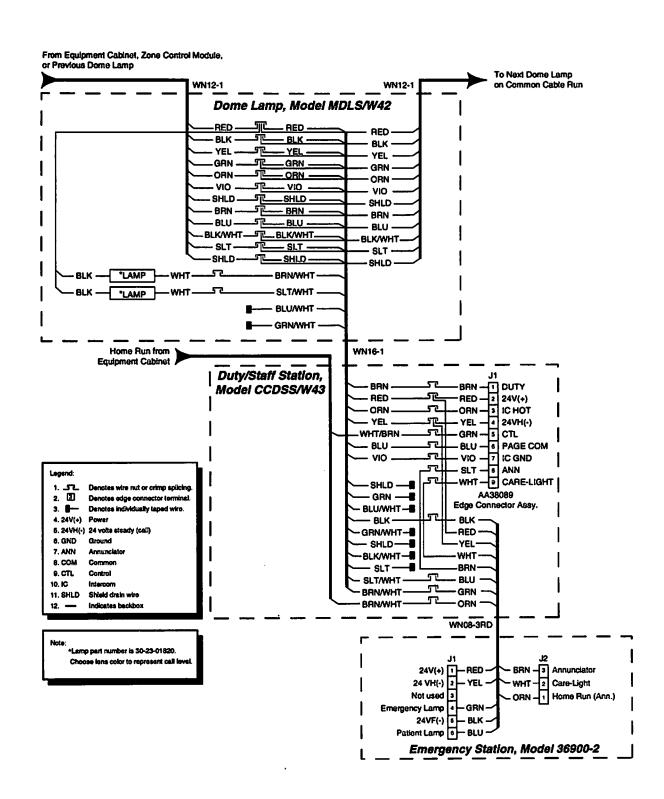


Figure 10. Connections for a Duty/Staff Station with Emergency Station

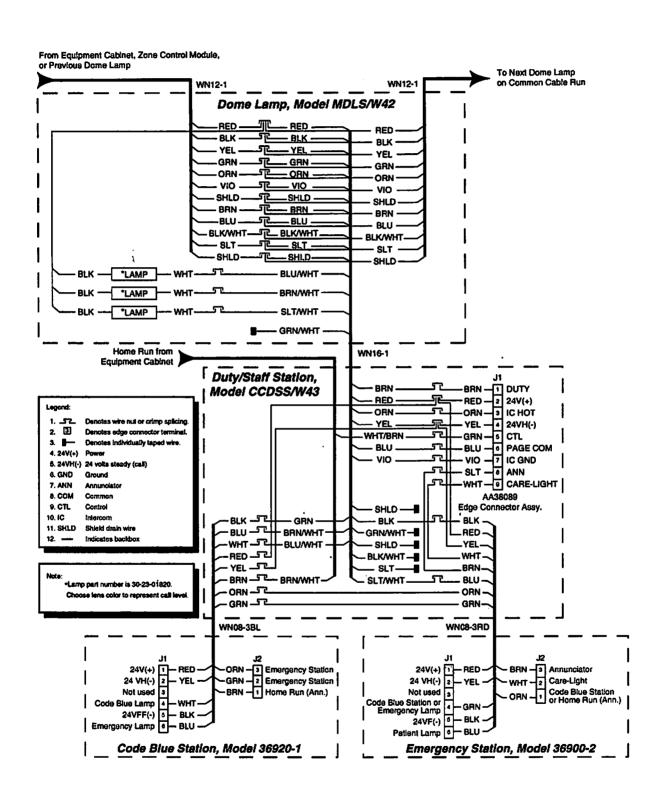


Figure 11. Connections for a Duty/Staff Station with Emergency and Code Blue Station

4.2 Setting the Duty/Staff Station Switch

Each duty/staff station contains one switch which must be set before the station is mounted. The switch shown in <u>Figure 12</u>, referred to as the function switch, is not externally accessible once the station is mounted.

The function switch is designated SW3 and sets the station operating mode for duty or staff.

a. Set SW3 on the main PCB as follows:

STATION MODE

SW3 POSITION

Duty

Towards pin 1 (to the outside)

To the inside

Staff

4.3 Mounting a Duty/Staff Station to the Backbox

Before plugging in the connectors, make sure the system cabling has been fully tested per <u>Section 600</u>. Also make sure the backbox for the station unit is UL listed and properly grounded to the equipment cabinet via #10AWG wire or continuous metallic conduit.

Before mounting a patient station onto the backbox, do the following:

- a. Check the function switch SW3 for proper setting.
- b. Plug connectors onto the station unit with system power OFF.
- Make sure all connectors are fully inserted.
- d. Check all terminations for loose connections.
- e. Test all wiring and connections with station connectors plugged in.
- Once fully tested with station connectors plugged in, dress all cables and installation wires against each side of the backbox.

To install a duty/staff station, refer to Figure 12 and proceed as follows:

- a. Using the four nylon screws provided, loosely attach the station to the backbox.
- b. Adjust the station to obtain proper level.
- c. Tighten the four nylon screws.



Do not overtighten the nylon screws to avoid stripping the threads.

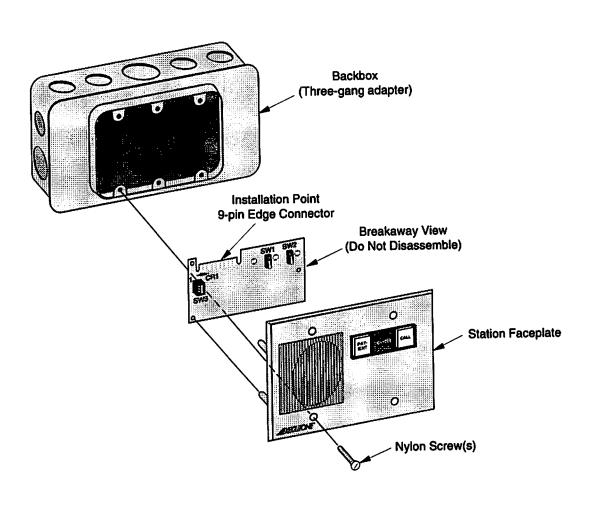


Figure 12. Mounting a Duty/Staff Station

5. BACKBOX ADAPTER KIT

The Model AA38574 Backbox Adapter Kit is used to install any W43 type station into an existing W1, W2 or W330 type backbox.

The adapter kit includes a metal subplate that mounts onto the existing backbox to provide a sturdy support for the new station. The metal subplate is covered by a faceplate adapter which is adjustable to compensate for minor backbox mounting misalignment.

To install the backbox adapter kit, refer to Figure 13 and proceed as follows:

a. Select the appropriate four mounting holes on the metal subplate that match the four mounting holes on the existing backbox.

EXISTING BACKBOX MOUNTING HOLES

W1 (A7170)	A1 through A4
W2 (A4173)	B1 through B4
W330 (A41724)	C1 through C4

- b. Using the four hex head screws, secure the metal subplate to the backbox.
- c. Install the two square nuts (A2843) over the D1 and D2 holes of the metal subplate.
- d. Install the four square nuts (A9160) over the E1 through E4 holes of the metal subplate.
- e. Using the two phillips button head screws, loosely attach the adapter faceplate to the metal subplate.
- f. Rotate the adapter faceplate until it is level. Tighten the button head screws.

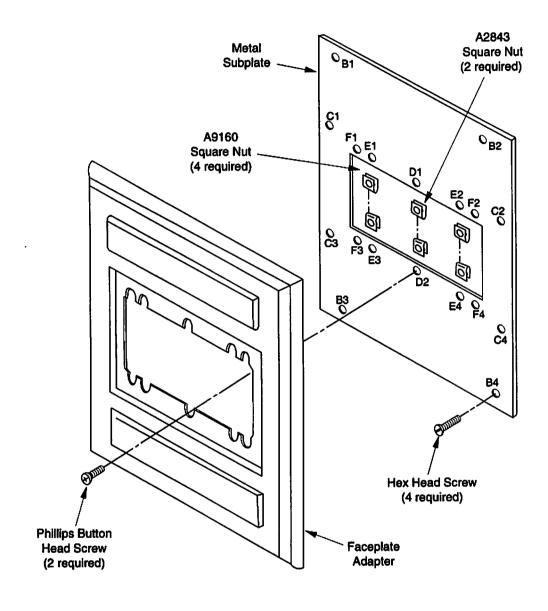


Figure 13. Backbox Adapter Kit

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Section 440 - Station Peripheral Installation

1. GENERAL

This section provides installation instructions for connecting and mounting CARE/COM® II-E peripheral equipment. This specific information is to be used in conjunction with <u>Table 1 in Section 400</u>, which provides the necessary and proper installation sequence to get a system up and running safely and efficiently. When finished installing the station peripherals, go back to Table 1 in Section 400 for the next step in the installation sequence.

Before you install the CARE/COM II-E station peripherals, the backboxes and conduit must be installed and the system cabling must be in place. Installation for each peripheral device consists of:

• Connecting the peripheral equipment to the cabling.

J7390RCS/W43P

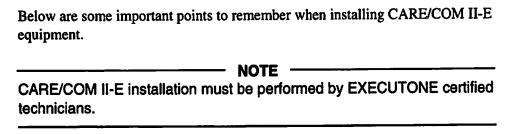
☐ Plugging in connectors and mounting the peripheral equipment to the backbox.

Each peripheral device is connected to system cabling and then mounted on the required backbox. The connectors are permanently terminated to the system cabling. The equipment covered in this section includes:

Q	Model MDLS/W42	Dome Lamp
	Model EX-ZCM3	Zone Control Module
	Model 36920-1	Code Blue Station
	Model 36900-2	Emergency Station
	Models 33920-1, -2,	Entertainment and
	31780-2, 31770-2	Environmental Interface
	Models J7376R1S/W43P,	Older Model Radio/TV Selector
•	J7376R2S/W43P,	and Comfort Control Units
	J7377C1S/W43P,	
	J7377C2S/W43P, and	

1.1 Installation Reminders

Make sure you have read and understand <u>Sections 300</u> and <u>400</u>. These sections provide equipment requirements and other important information pertaining to installing a CARE/COM II-E system. Remember, CARE/COM II-E is the communications link between the patient and the healthcare provider. As such, you must know the information presented in <u>Section 300</u> and <u>Section 400</u>.



- a. Before installing any equipment, inspect shipping cartons for any signs
 of damage. Have the delivery person note any damage found on the
 shipping document.
- b. Always make sure that system power is off when performing any connections or when installing or removing a peripheral device.
- c. Always plan and document all phases of the installation. Also use the system data sheets for accurate record-keeping.
- d. All cables should be marked to facilitate future troubleshooting and servicing.
- e. Use the correct connecting tool and crimping tool when performing all connections.
- f. Follow all notes, cautions, and warnings.



For maximum safety, perform all connections with system power off, and then test all connections according to <u>Section 600</u>.

1.2 Call Origination Devices

The CARE/COM II-E call devices do not require any special installation instructions except that a call device must be plugged into each patient station's receptacle(s).

The following call devices can be plugged into a CARE/COM II-E patient station:

3 Button Patient Control Unit	Model PCU-3
Call Button Cordset	Model M18A
Geriatric Call Button Cordset	Model M88
Cordet (for combustible	Model M518X
applications)	

Call Origination Button Model M282

- NOTE -

The Model M18A, M88, and PCU-3 call origination devices are NOT to be used by patients undergoing oxygen therapy.

2. CODE BLUE STATION - MODEL 36920-1 AND EMERGENCY STATION - MODEL 36900-2

The code blue station and emergency station can be used in conjunction with CARE/COM II-E patient or duty/staff stations, or as a stand-alone device.

All connections to the code blue and emergency stations are made via plug-in IDC connectors, as <u>Figure 1</u> illustrates. These IDC connectors are permanently connected to the system using the correct connector tool.

For installation, the following IDC connectors are required for each code blue or emergency station:

One 15-06-50006, 6-pin IDC connector with 15-06-51006 strain
relief

One 15-06-50003, 3-pin IDC connector with 15-06-51003 strain relief

2.1 Connecting the Code Blue Station and Emergency Station to a Station Unit

Reference <u>Figure 1</u> for code blue and emergency station connections to a patient or duty/staff station. <u>Figure 2</u> illustrates multiple emergency stations associated with one station unit.

- a. Connect the 6-pin IDC connector to the system cabling (and securely snap the strain relief onto the IDC connector).
- b. Connect the 3-pin IDC connector to the system cabling (and securely snap the strain relief onto the IDC connector).
- c. Do NOT plug the IDC connector onto the station unit at this time, make sure all of the cabling is fully tested as described in Section 600.
- d. Connect the 6-pin and 3-pin connector to the device(s).
- e. Once wire connections are fully tested, proceed to <u>paragraph 2.3</u> to mount a code blue and emergency station to the backbox.

2.2 Connecting a Stand-Alone Code Blue and Emergency Station

Reference Figure 3 and proceed as follows:

- a. Connect the 6-pin IDC connector to the system cabling (and securely snap the strain relief onto the IDC connector).
- b. Connect the 3-pin IDC connector to the home run from the central equipment (and securely snap the strain relief onto the IDC connector).

Do not cut off unused cable wires; all unused wires must be individually capped off and isolated from possible ground faults.

- c. DO NOT plug the IDC connectors onto the station unit at this time, make sure all of the cabling is fully tested as described in <u>Section 600</u>.
- d. Connect the 6-pin and 3-pin connector to the stand-alone device(s).
- e. Once wire connections are fully tested, proceed to <u>paragraph 2.3</u> to mount a code blue and emergency station to the backbox.

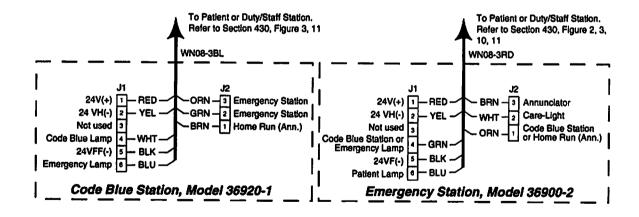
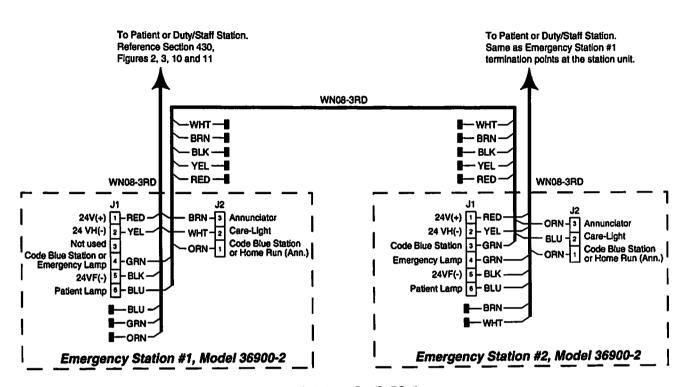


Figure 1. Connecting the Code Blue and Emergency Station to a Patient or Duty/Staff Station



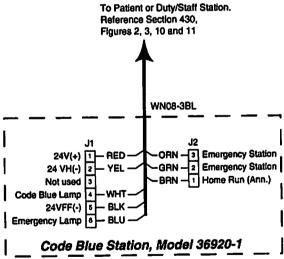
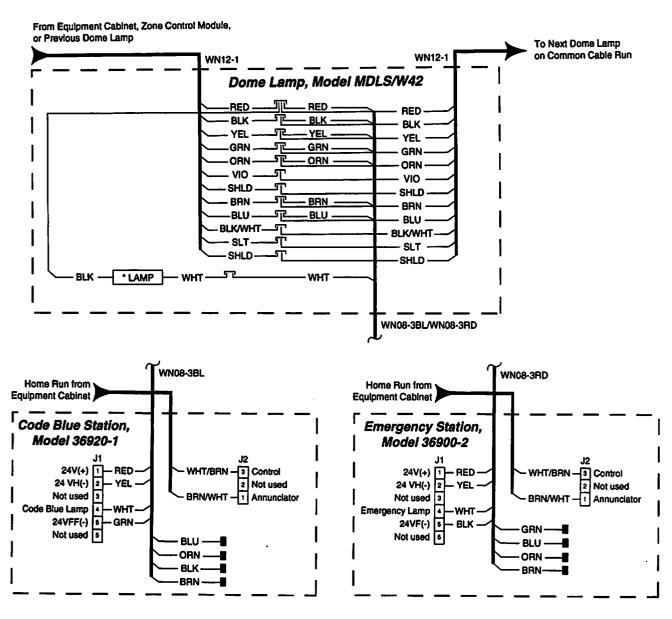


Figure 2. Connecting Multiple Code Blue/Emergency Stations to One Station Unit



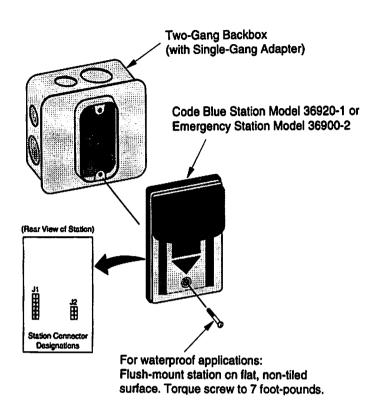
Note: * Lamp part number is 30-23-01820. Choose lens color to represent call level.

Figure 3. Connecting a Stand-Alone Code Blue and Emergency Station

2.3 Mounting the Code Blue Station and Emergency Station to the Backbox

Before plugging in the IDC connectors, make sure the system cabling has been fully tested. Also, make sure the backbox for the station unit is UL listed and properly grounded to the equipment cabinet via a #10AWG wire or continuous metallic conduit.
NOTE -
In order to be waterproof per UL, the emergency station must be flush-mounted on a flat, non-tiled surface. The screw securing the station unit base to the backbox must be torqued to 7 foot-pounds. Using a surface-mount backbox will not meet UL waterproof requirements.
To install a code blue or emergency station, refer to Figure 4 and proceed as follows:
System power must be OFF when you plug in IDC connectors.

- a. Plug in the station unit's IDC connector to the back of the station unit: plug the 6-pin IDC to connector J1, and the 3-pin IDC to connector J2.
- b. Test the cabling as described in Section 600.
- c. After cabling tests are successful, neatly dress all cables inside the backbox.
- d. Secure the station unit base to the backbox with the screws provided. For a waterproof installation, torque the screws to 7 foot-pounds.



Addition of the same

Figure 4. Mounting the Code Blue and Emergency Station

3. DOME LAMP - MODEL MDLS/W42

The surface wall or ceiling mounted modularly constructed dome lamp consists of a faceplate and yoke assembly with provisions for up to four colored lenses. Filler plates are available to cover openings for unfilled lamp positions. The yoke assembly is a metal plate provided with the necessary hardware for installation onto a two gang backbox.

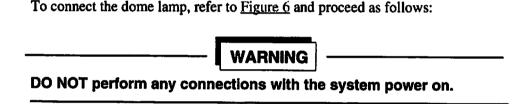
onto a two gang backbox.			
The dome lamp is used in three ways:			
۵	In standard dome lamp applications, the dome lamp is mounted outside a patient room and provides visual signaling for that room.		
0	In a ward, each station can have its own dome lamp to provide visual signaling for that station inside the room (typically, above the bed). An additional dome lamp can be installed above the door(s) to the ward.		
٥	In zone lamp applications, the dome lamp is mounted in a corridor and provides visual signaling for that entire zone.		
The dom	e light bas	se, MDLS/W42,	consists of the following items:
	0000	one Yoke Asse one Faceplate four Tubular Fa four Pan Head	asteners
The yoke	e assembly ew, and or	y comes equipped ne strain relief ind	d with one "U" type fastener, one green hex cluding tie wrap.
In addition, the following components are available separately:			
	00000	30-23-01820 A44835 A44376-1W A44376-1R A44376-1B A44377	Red Lens

3.1 Assembling the Dome Lamp

To assemble the dome lamp, refer to Figure 5 and proceed as follows:

- a. Insert the four tubular fasteners into the four corner rounded holes of the yoke assembly until they snap in place.
- b. Mount the lamp socket(s) onto the faceplate.
- c. Thread each pair of wires through the strain relief mounted on the yoke assembly as shown in <u>Figure 5</u>. Make sure to loop the wires around and through the tie wrap per the strain relief detail.

3.2 Connecting the Dome Lamp



- a. Connect the cabling from the patient station (for dome lamp application)
 or zone control module (for zone lamp application) to the lamp socket
 wires.
- b. Connect a building ground wire to the green hex head screw terminal and tighten the "U" type fastener.



For cabling connections at the station unit, see <u>Section 430</u> (for dome lamp applications). For cabling connections at the zone control module, see <u>paragraph 4.1</u> of this section (for zone lamp applications).

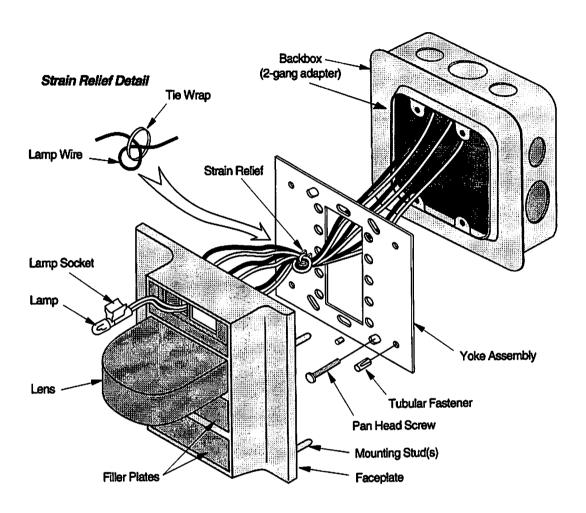


Figure 5. Exploded View of the Dome Lamp

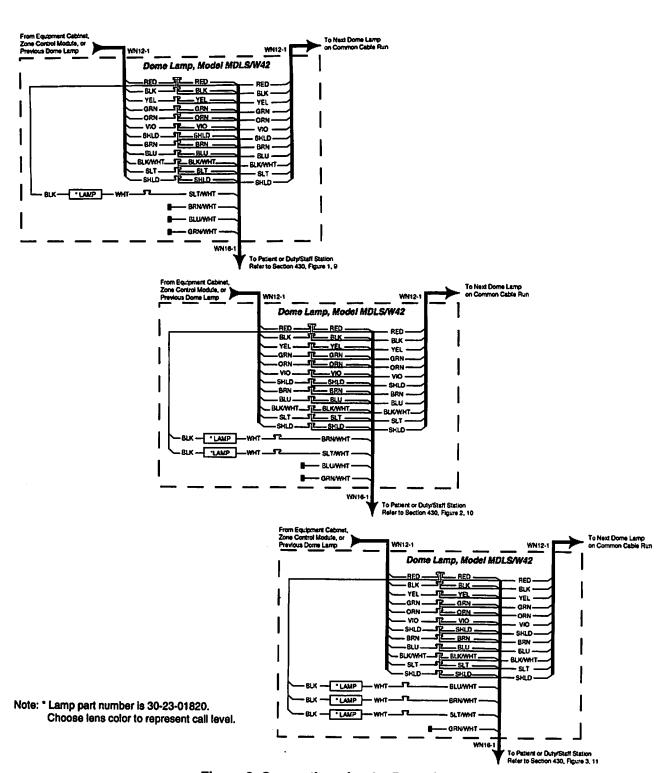


Figure 6. Connections for the Dome Lamp

3.3 Mounting the Dome Lamp to the Backbox

Make sure the two-gang backbox for the dome lamp is UL listed. Properly ground the backbox to the equipment cabinet via a #10AWG wire or continuous metallic conduit.

To install the dome lamp, refer to Figure 5 and proceed as follows:

- a. Using the four pan head screws, loosely attach the yoke assembly to the backbox.
- b. Rotate the yoke assembly to attain proper orientation and tighten the four pan head screws.
- c. Dress the lamp wires inside the backbox. After aligning the four mounting studs of the faceplate into the tubular fasteners, firmly push the faceplate until it is securely resting against the wall surface.
- d. Insert the lamp(s) into the lamp socket(s) and lock the lamp by pushing in and rotating it clockwise.
- e. Insert the colored lenses into the faceplate.
- f. Where there is no lamp and lens, insert filler plate(s) into the faceplate.

4. ZONE CONTROL MODULE - MODEL EX-ZCM3

The zone control module supports zone lamps for the cable groups in the system. Zone lamps connect to the zone control module, which terminates at the equipment panel via the common cable run.

4.1 Connecting the Zone Control Module

The zone control modules mount to the wall within a zone location.

Each WN12-1 cable from the backplane connects to the zone control module first, before continuing to the station units on the common cable run.

To connect the zone control module, refer to Figure 7 and proceed as follows:

- Connect the WN12-1 cable to the 9-pin edge connector on the zone control module.
- b. Connect two WN03-2 wires from the zone lamp to the control module.
- c. Splice the remaining pairs of the WN12-1 cable leads together.

4.2 Mounting the Zone Control Module

Make sure the system cabling has been fully tested per <u>Section 600</u>. Also make sure that the backbox used for mounting the zone control modules is UL listed and properly grounded to the equipment cabinet via a #10AWG wire or continuous metallic conduit.

To install a zone control module, refer to Figure 8 and proceed as follows:



DO NOT perform cable connections while system power is on.

- Ensure the wiring connections are completed as described in <u>paragraph</u> 4.1.
- b. Test the cabling per Section 600.
- c. After cable test are successful, neatly dress all cables inside the backbox. Secure the zone control module to the backbox with the four screws provided.

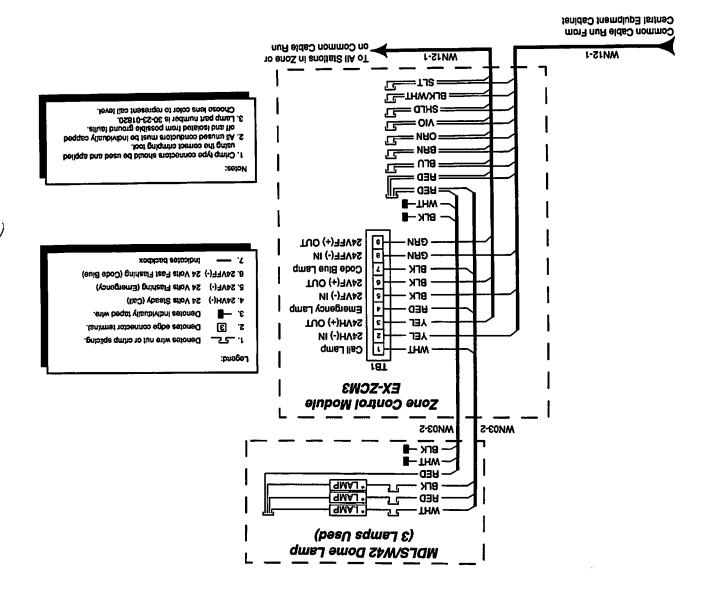


Figure 7. Connections for the Zone Control Module

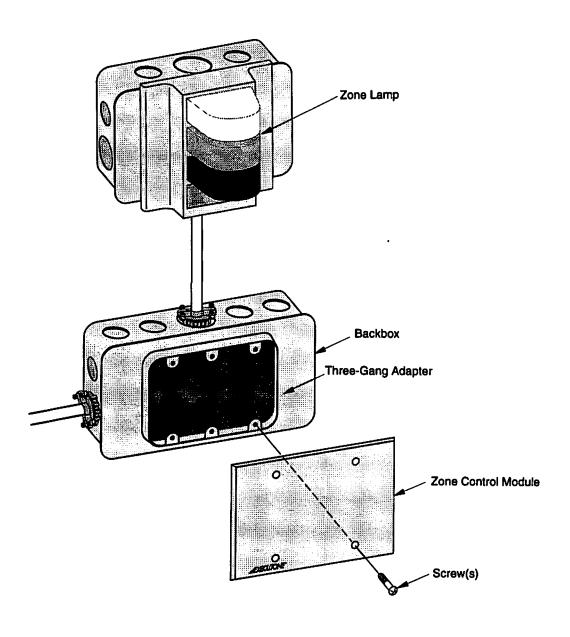


Figure 8. Mounting the Zone Control Module

5. ENTERTAINMENT AND ENVIRONMENTAL INTERFACE UNITS -MODELS 33920-1, -2, 31780-2, 31770-2

The Model 33920-1, -2 Television and Light Interface supports the use of a television and a light by a patient using the CARE/COM II-E patient control unit. The 33920-1 provides one audio channel, and the 33920-2 provides two audio channels.

The Model 31780-2 and 31770-2 Entertainment Interfaces support the use of a television and radio by a patient using the CARE/COM II-E patient control unit. The 31780-2 supports one bed, and the 31770-2 supports two beds.

NOTE -

Some type of entertainment and environmental interface unit MUST be used whenever interfacing to any entertainment or environmental device(s). In addition, refer to the information that follows pertaining to isolation transformers.

All connections to the entertainment and environmental interface units are made via IDC connectors (with strain reliefs) or crimp connectors. These connectors are applied using the correct connecting tool or crimping tool.

For installation, the following connector is required for the entertainment and environmental interfaces:

- One 15-06-50002 2-Pin IDC Connector and one 15-06-51002 2-Pin Strain Relief: for power connections to the 33920-1, -2.
- ☐ One 15-06-50008 8-Pin IDC Connector and one 15-06-51008 8-Pin Strain Relief: for patient station connections to the 33920-1, -2.
- ☐ One 15-06-50009 9-Pin IDC Connector and one 15-06-51009 9-Pin Strain Relief: for television/light connections to the 33920-1, -2.
- □ AA38696 22-Pin Connector: one required for the 31780-2: two required for the 31770-2.

The entertainment and environmental interface units are powered from the M-217/4101 Power Supply. See Section 300, paragraph 10, for details on the limitations of the M-217/4101 for powering entertainment and environmental interfaces. A common run of WN02-3 wire connects the power supply to all entertainment and environmental interfaces.

The required M-217/4101 Power Supply(s) must be installed in a UL recognized enclosure having provisions for AC input within the enclosure.

Isolation Transformers

Note that the appropriate isolation/impedance matching transformer(s) are required and must be ordered separately, and then installed in conjunction with the previously mentioned entertainment interface units.

If interfacing to a device (such as a TV) that has an audio output impedance of between 8 and 25 ohms, use transformer part number 02026. If interfacing to a device (such as a radio distribution) that has an audio output impedance of between 1.6K and 2.4K ohms, use transformer part number A09387. If interfacing both to a TV and to radio distribution, use two transformers, part number A09387; one transformer is for isolation and the other for impedance matching.

- NOTE -

The 33920-1, -2 Television and Light Units have isolation transformers built into the circuitry, and therefore do not require either 02026 or the A09387 transformers to be added.

The following entertainment units no longer ship with isolation transformers:

- Model 31780-2 Single Entertainment Interface
- Model 31770-2 Dual Entertainment Interface

Refer to <u>Figure 10</u> for information on entertainment interfacing connections (including the isolation transformer and the impedance matching transformer).



Under no circumstances should an entertainment unit be installed without an isolation transformer!

5.1 Connecting the Entertainment and Environmental Interface Units

To connect the entertainment and environmental interface connectors, refer to Figures 9 and 10 and proceed as follows:

WARNING

DO NOT perform any connections with the system power on.

a. Connect the IDC connectors or the 22-pin connectors to the patient station cabling, the radio distribution cabling, the television set, low voltage devices, and the +24 volt power run as required.

Remember, a Hill-Rom® low voltage controller is required when connecting to lights, drapes, etc.

b. Do NOT plug the connector onto the entertainment and environmental interface; make sure all the cabling is fully tested per <u>Section 600</u>.



Pay close attention to the notes in <u>Figures 9</u> and <u>10</u> and check all connections carefully. For cabling connections at the patient station, see <u>Section 430</u>. For connections at the radio distribution system, see <u>paragraph 5. 3</u> in this section. Do not cut off unused cable wires; cap them off individually and isolate them from possible ground faults.

c. After cable tests are successful, neatly dress all cables inside the backbox.

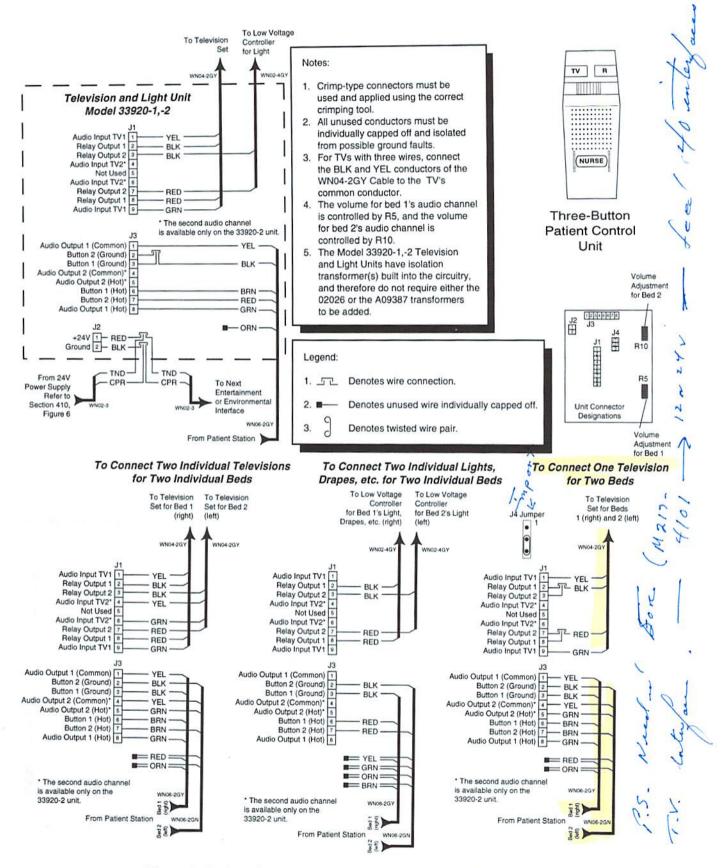


Figure 9. Connections for the Television and Light Interface

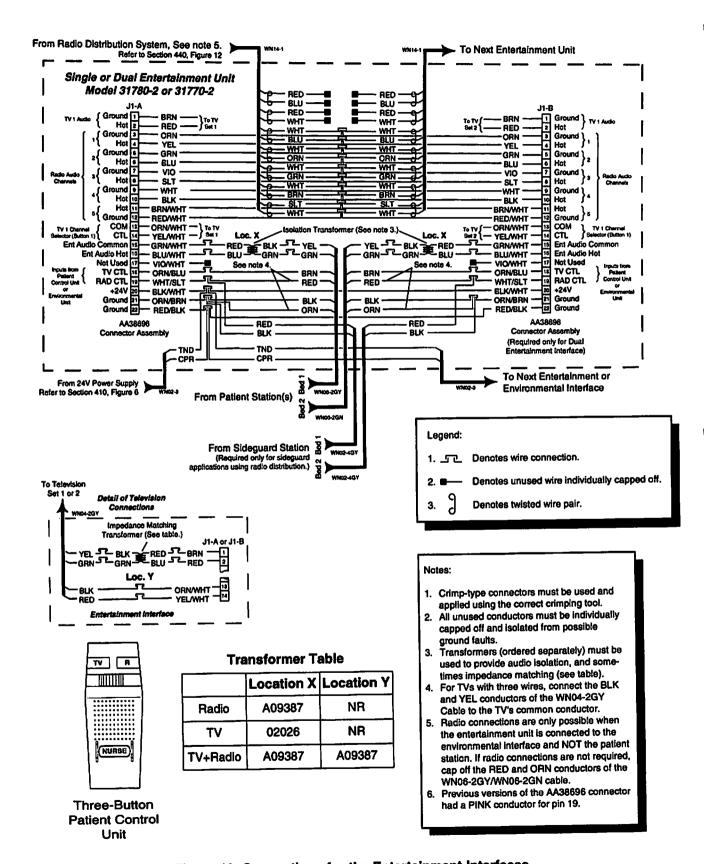


Figure 10. Connections for the Entertainment Interfaces

5.2 Mounting the Entertainment and Environmental Interface Units

Before plugging in the connectors, make sure the system cabling has been fully tested per Section 600. Also make sure the backbox for the entertainment and environmental interface is UL listed and properly grounded to the equipment cabinet via a #10AWG wire or continuous metallic conduit.

To install an entertainment and environmental interface, refer to Figure 11 and proceed as follows:



DO NOT plug any connectors in with the system power on.

- a. Plug in the connectors to the entertainment and environmental interface.
- b. Test the cabling per Section 600.
- c. Secure the entertainment and environmental interface to the backbox with the four screws provided. Use a single-gang backbox for the installation of the 33920-1, -2 unit.

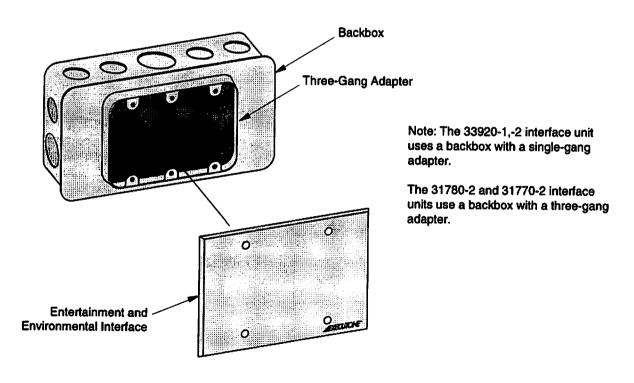


Figure 11. Mounting the Entertainment/Environmental Interfaces

5.3 Connecting the Entertainment Interfaces to the Radio Distribution System

	WARNING			
DO NOT perform any connections with the system power on.				
	nect an entertainment interface to the radio distribution system, refer to 12 and proceed as follows:			
a.	Connect the appropriate WN14-1 cable pairs to the designated amplifie output.			
b.	After connections are completed and tested, adjust the amplifier output level to achieve 1.0 volt RMS at the patient station.			
	WARNING -			
Input tion.	from radio/TV must not exceed 1 volt RMS at the patient sta-			
	CAUTION			
tions	close attention to the notes in <u>Figure 12</u> and check all conneccarefully. For cabling connections at the entertainment and onmental interface, see <u>paragraph 5.1</u> in this section.			
	NOTE -			

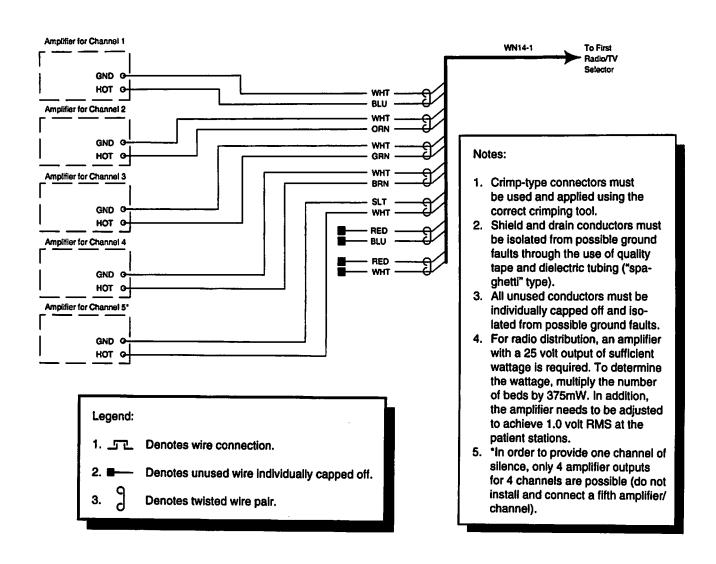


Figure 12. Connections for the Radio Distribution System

6. OLDER MODEL RADIO/TV SELECTOR AND COMFORT CONTROL UNITS-J7376R1S/W43P, J7376R2S/W43P, J7377C2S/W43P, AND J7390RCS/W43P

Model J7376R1S/W43P is a single radio/TV selector control unit used with a single patient station. It allows listening to and remote control of five radio program channels and a TV set using a patient control unit.

Model J7376R2S/W43P is a dual radio/TV selector control unit used with a dual patient station. It also allows listening to and remote control of five radio program channels and two TV sets individually, using two independent patient control units.

Model J7377C1S/W43P is a single comfort control unit used with a single patient station. It allows remote control of four auxiliary comfort devices using a patient control unit.

Model J7377C2S/W43P is a dual comfort control unit used with a dual patient station. It also allows remote control of four auxiliary comfort devices using two independent patient control units.

Model J7390RCS/W43P is a single radio/TV selector and comfort control unit used with a single patient station. It combines the functions of Models J7376R1S/W43P and J7377C1S/W43P in one unit.

——— NOTE

Some type of entertainment and environmental interface units MUST be used whenever interfacing to any radio/entertainment and comfort control device(s). In addition, refer to the information that follows pertaining to isolation transformers.

For installation, the following connector is required for the entertainment and environmental interfaces:

One 22-pin Connector Assembly AA38696; two required for dual radio/TV selection and comfort control.

The M-217/4101 Power Supply is used to power the radio/tv selector and comfort control units. A common run of WN02-3 wire connects the power supply to all radio/TV selector units and comfort control units in a system. The required M-217/4101 Power Supply(s) must be installed in a UL recognized enclosure having provisions for conduit connection for the AC input.

Note that the appropriate isolation/impedance matching transformer(s) are required and must be ordered separately, and then installed in conjunction with the above-mentioned entertainment interface units.

If interfacing to a device (such as a TV) that has an audio output impedance of between 8 and 25 ohms, use transformer part number 02026. If interfacing to a device (such as a radio distribution) that has an audio output impedance of between 1.6K and 2.4K ohms, use transformer part number A09387. If interfacing both to a TV and to radio distribution, use two transformers, part number A09387; one transformer is for isolation and the other for impedance matching.



Under no circumstances should an entertainment unit be installed without an isolation transformer.

6.1 Connecting the Radio/Entertainment and Comfort Control Units

A common run of WN02-3 cable connects the power supply to all radio/TV selector unit and comfort control units in a system.

In addition, a common run of WN14-1 cable is used to connect the radio distribution system to all radio/TV selector units in the system.

In dual patient station applications, if a radio/TV selector is to be provided in addition to the comfort control unit, the radio/TV selector unit is connected to the comfort control unit in accordance with <u>Figure 13</u>. The comfort control unit is then connected to the dual patient station per <u>Figure 14</u>. Note that the WN05-1 cables shown in Figure 14 are required only for a dual patient station connection.



DO NOT perform any connections with the system power on.

- a. Connect the WN08-3 cable from a single or dual patient station (or comfort control unit) to the 22-pin connector J1-A and J1-B (as seen in <u>Figure 13</u> for J7390RCS/W43P).
- b. For a dual patient station (or comfort control unit), connect the WN05-1 cable to the 22-pin connector J1-B.

c. Using WN05-1 cable in dual patient station applications, connect the RED and WHT pair to terminals 1 and 2 for the audio output line, and the GRN and BLK pair to terminals 13 and 14 for the low voltage control line, to the associated TV set. Individually tape the unused SHLD wire at each end of the cable.

Input from radio/TV must not exceed 1 voit RMS at the patient station.

Terminals 13 and 14 provide normally open dry contacts rated for 14 volts

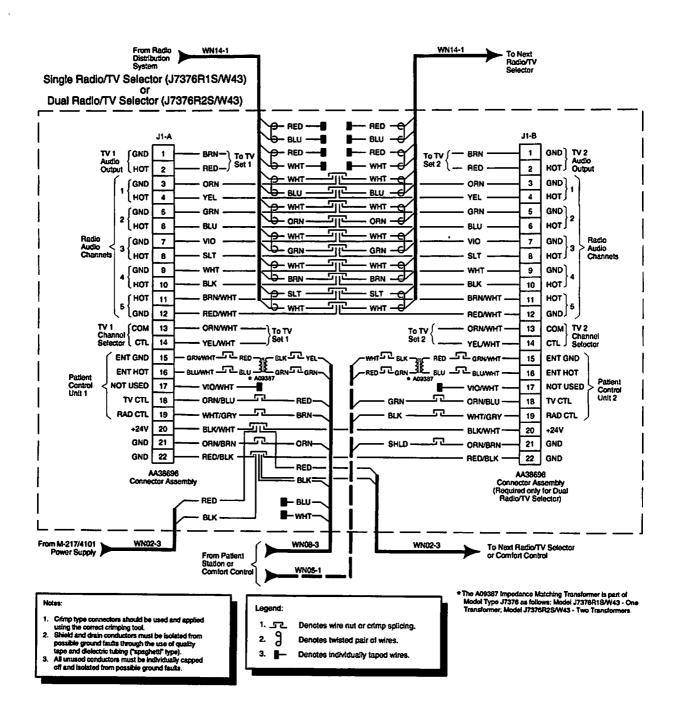


Figure 13. Connections for the Radio/TV Selector Unit (J7376R1S/W43P and J7376R2S/W43P)

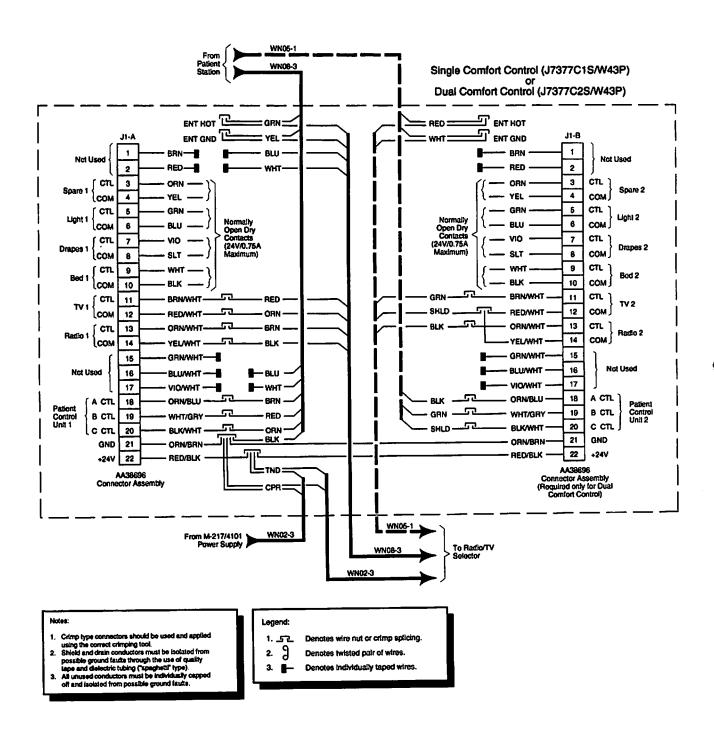


Figure 14. Connections for the Comfort Control Unit (J7377C1S/W43P and J7377C2S/W43P)

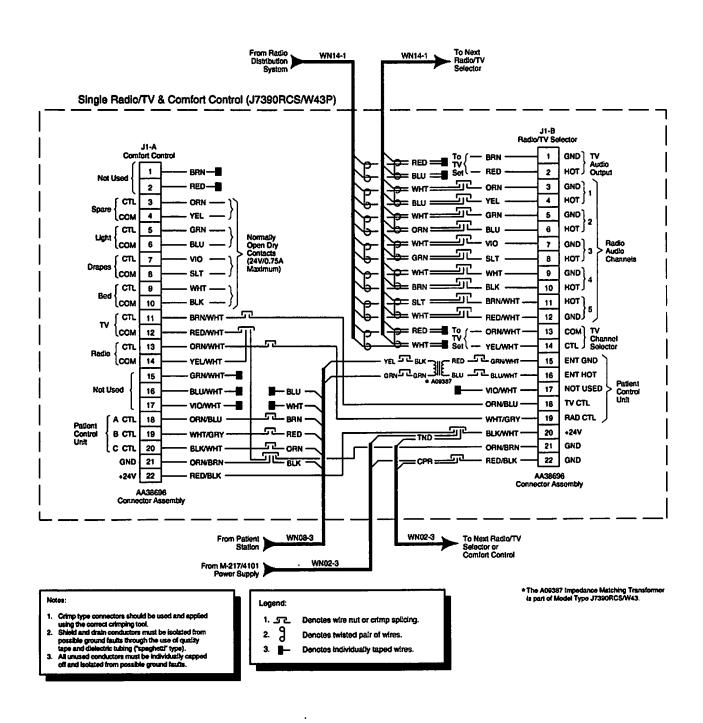


Figure 15. Connections for the Radio/TV Selector and Comfort Control Unit (J7390RCS/W43P)

6.2 Mounting the Radio/TV Selectors and Comfort Control Units

Before plugging in the connectors, make sure the system cabling has been fully tested per <u>Section 600</u>. Also make sure the backbox for the interface unit is UL listed and properly grounded to the equipment cabinet via a #10AWG wire or continuous metallic conduit.

To install an entertainment and environmental interface, refer to <u>Figure 11</u> and proceed as follows:



DO NOT plug any connectors in with the system power on.

- a. Plug each printed circuit board into the appropriate AA38696 22-pin connector assembly.
- b. Secure the entertainment and environmental faceplate to the backbox with the four screws provided.

6.3 Connecting Radio/Entertainment Units to the Radio Distribution System

The connections for the older model radio/entertainment units are the same as the newer entertainment interface models. Refer to <u>paragraph 5.3</u> and <u>Figure 12</u> for installation instructions and diagram.

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Section 500 - Programming

1. GENERAL

The EXECUTONE® CARE/COM® II-E offers the healthcare environment a comprehensive Nurse Call System. Each CARE/COM II-E system requires initial system setup prior to the system functioning. Programming the CARE/COM II-E system enables/disables the various features which allows the system to operate at optimum capacity.

During the system planning phases, database data sheets should have been completely filled out. A complete and accurate set of data sheets will make system programming significantly easier. Furthermore, the data sheets are very important for future reference if the system needs servicing.

The CPU (Central Processing Unit) controlled system is designed to provide onsite or remote programming capability for system features. The menu-driven program allows each system to be customized for individual facility requirements. The system is also equipped with a built-in modem to provide off-site programming and maintenance capabilities. Any function that can be accomplished by the on-site programming terminals can be accomplished remotely through the modem.

This section is meant to serve as a convenient programming reference. As such, it is assumed that the system power is on and the system is operative.

1.1 Before Programming

Before programming, make sure the following conditions are met:

- a. The data sheets, found in <u>Appendix A</u>, are accurate and complete. Make sure to document any pertinent information.
- b. The system has been defaulted to clear RAM memory.
- c. All central equipment, nurse control station (NCS), patient station, duty/ staff station, emergency and code blue station switches are set properly.
- d. The system is operating properly.

1.2 The Programming Terminal

System programming can be accomplished from any one of the input/output ports, including the port used as the operator position. Programming is accomplished by means of programming screens and screen graphics. Four types of terminals are supported. These are:

☐ EXECUTONE (The Integrated Terminal (p/n 40017) is supported with this terminal type.)

OUME (109)

☐ IBM/compatible (This terminal type supports computers running terminal emulation programs and NOT IBM terminals.)

☐ WYSE (WYSE 50, not the integrated terminal.)

1.3 Accessing The Programming Screens

Once the programming terminal has been connected, the programming screens may be accessed.

a. Press the ESC (escape) key.

The system prompts for a password. Access to the programming screens is protected by eight levels of passwords. Each level progressively allows more access to programming. Level 8 allows the most access, and is used for all programming and maintenance functions.

- b. Enter the password of the level to be accessed, for example, type 'LEVEL1'.
- c. Press the RETURN key. If the correct password has been entered, the *Main Menu* appears. If the wrong password is entered, press the ESC key to start again.

1.4 Changing Passwords

The password to access level 8 must be known to change all passwords.

Default Passwords

The default passwords for each level of system access are:

Access level 1	LEVEL1
Access level 2	LEVEL2
Access level 3	LEVEL3
Access level 4	LEVEL4
Access level 5	LEVEL5
Access level 6	LEVEL6
Access level 7	LEVEL7
Access level 8	LEVEL8

2693 xtoni. 916-7235995 Ross Prop. 916-515-1341

1.5 **How To Change Passwords**

a. At the "ENTER PASSWORD>" prompt, type the level 8 password. Press the **RETURN** key to register information in the system.

The programming Main Menu appears.

- b. Press the K key. The system prompts for the manager's password. The manager's password is the password to access level 8.
- c. Enter the level 8 password. Press the RETURN key to register information in the system. If the correct password is entered, the Password Definition screen appears. Otherwise, the Main Menu appears.
- d. Using the RETURN key, or the up and down arrow keys, move the cursor to the password to be changed.
- e. Enter the new password. The screen does not echo the characters typed. Be sure to record and file the new password(s) for safe-keeping.
- f. Press the RETURN key. The system prompts for the password again for verification.
- g. Enter the new password again exactly as before.
- h. Press the **RETURN** key. If the two entries agree, the screen displays "Password was changed." If the two entries do not agree, the screen displays "Password was NOT changed."
- i. Press the ESC key to leave the programming screen and return to the Main Menu.

2. PASSWORD- ACCESS LEVEL PROGRAMMING

Access to the various programming screens of the system is controlled by eight programmable passwords. The programmer defines which passwords allow access to the different programming screens. This definition is accomplished on the Access Levels programming screen of the Main Menu. The Access Levels programming screen itself can only be programmed from access level 8. The password protection scheme is arranged such that any screen can be accessed by a particular level password can also be accessed by passwords accessing higher levels. For example, if the System Programming screen is only to be accessed by a programmer using access level 6, it can also be accessed by a programmer using access levels 7 or 8. Refer to Figure 1 for an example of the access levels determined for the CARE/COM II-E menus.

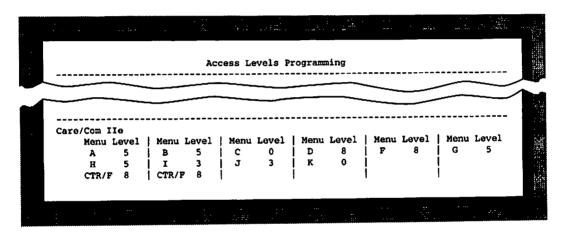


Figure 1. CARE/COM II-E Access Levels Programming

2.1 How To Program The Access Levels

The Access Levels programming screen can only be reached when using the password assigned to access level 8 (the manager's password).

- a. If not already on the Access Levels programming screen, from the Main Menu, press the X key.
 - The Access Levels programming screen appears with the cursor at the access level for the "A" (Patient Station Programming) screen.
- b. Enter the number of the access level determined for the "A" programming screen.

c. Press the RETURN key.

ne not become

d. Press the RETURN key a second time to move the cursor to the next entry.

Continue entering the access levels for the different programming screens, pressing the RETURN key after each entry.

The RETURN key is used to advance the cursor to the next entry to be made. The directional arrow keys can also be used to move the cursor.

3. REMOTE PROGRAMMING

The system is equipped with a built-in 300/1200 baud modem which permits a technician to access the system from a remote location. The remote location requires only a terminal (one that is supported by system screen graphics) and a modem. The technician can then carry out any programming or maintenance that can be accomplished from an on-site programming terminal.

This feature could also be of use to a manager to access a system from any location. A personal computer, with suitable terminal emulation software, can be used in place of a terminal. The system's BACKUP and RESTORE feature can then be utilized.

Access to the modem is gained by either programming a trunk to be answered by the modem, or by transferring to the modem.

A trunk can be programmed to be answered by the modem by assigning the trunk to a modem line type 250. The line type is programmed on the *System Programming* screen of the *Main Menu*. A trunk with a line type of 250 is answered by the modem at all times.

A trunk can be transferred to the modem by transferring the call to extension 99 or 9# (not 3099 or 309#).

When the built-in modem answers, carrier tone is heard. The remote modem will then connect.

- a. Press the ESC key. The system prompts for a password.
- b. Enter your password. If the correct password is entered, the Main Menu will appear. If the wrong password is entered, press the ESC key and try again.

4. CARE/COM II-E NURSE CALL SYSTEM MAIN MENU

All programming functions and informational displays pertinent to the CARE/COM II-E Nurse Call System begin and end with the CARE/COM II-E Nurse Call System Main Menu. The main menu consists of eleven sub-menu selections, as well as a selection to Exit the CARE/COM II-E Nurse Call System Main Menu. Refer to Figure 2 to view the sub-menu choices available to access.

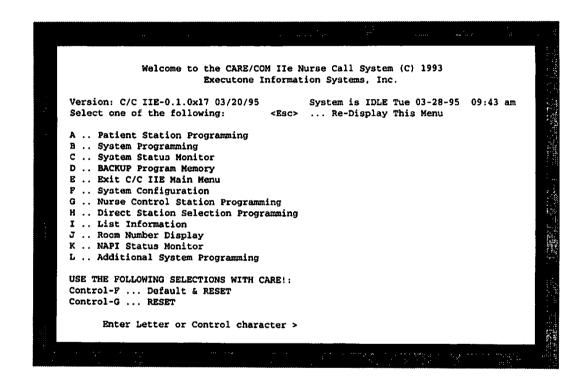


Figure 2. CARE/COM II-E Nurse Call System Main Menu

4.1 Accessing The CARE/COM II-E Nurse Call System Main Menu

a. From the Main Menu, press the letter corresponding to the programming display you wish to access. In this instance, press the H key. The CARE/COM II-E Nurse Call System Main Menu will appear.

Programming

- b. Press the letter corresponding to the programming/information display you wish to access. The corresponding screen will appear.
- c. To return to the CARE/COM II-E Nurse Call System Main Menu from any programming screen, press the ESC key.

Refer to the appropriate paragraph in this section for further instructions pertaining to the menu chosen.

5. PATIENT STATION PROGRAMMING

The Patient Station Programming screen is used to enter information particular to an individual patient station, as <u>Figure 3</u> illustrates. CARE/COM II-E's station configuration identifies various parameters pertaining to the individual stations.

There are several different types of patient stations available in the CARE/COM II-E system. They are:

Single Patient Station
Dual Patient Station
Single Patient Sideguard Station
Dual Patient Sideguard Station
Duty/Staff Station
Emergency Station
Code Blue Station

5.1 Field Description Of The Patient Station Programming Screen

The [Z]one and [U]nit are fixed identities in the system. A zone consists of twelve units. There can be up to 64 programmable zones in a CARE/COM II-E system. Unit is identified as a station: single or dual patient, sideguard (single - 1, dual - 2), duty/staff, emergency or code blue. The system identifies whether the station is INSTALLED or NOT INSTALLED.

[T]ype of Station currently has no application to the CARE/COM II-E system.

The [R]oom Number is a programmable entry, used to further specify the identity of a station in a particular unit and zone. Found also in the Room Number field is the [S]tation Group. A station group is the single unit to which all rooms are configured and identified at the NCS. The usefulness of a station group is immeasurable. A station group could be as small as a single room, or as large as all the station units in the system. It is the flexibility of the station group which enhances the NCS; particularly the Call Assignments feature. Refer to Section 200 or the CARE/COM II-E User Guide, for practical applications utilizing station groups.

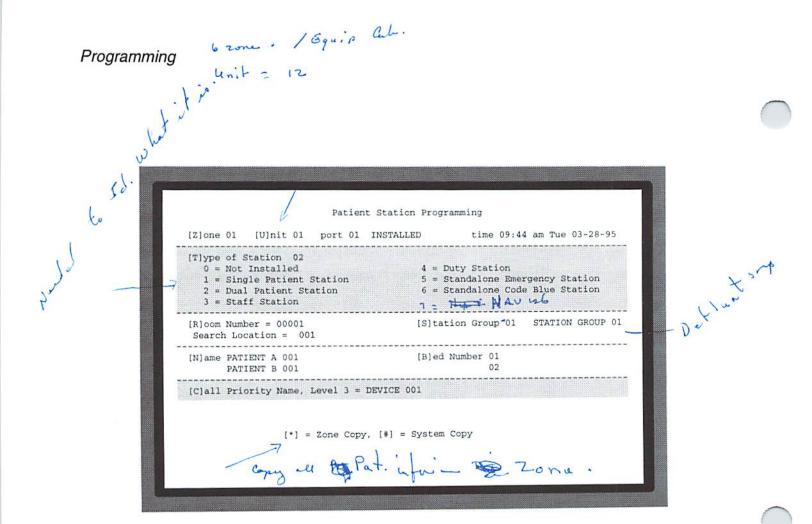


Figure 3. Menu A - Patient Station Programming

The [N]ame field, like the Station Group, has a 16-character alpha-numeric entry available to specify a room. The [B]ed Number further distinguishes the room. Although there are two lines available for a [N]ame and [B]ed Number, presently only one bed at a dual patient station is recognized (two on a dual sideguard patient station). However, it is possible to program up to 49 beds in a room.

[C]all Priority Name, Level 3 currently has no application to the CARE/COM II-E system. However, the call priority name can be changed, if necessary, in *System Programming*.

5.2 Data Input

To access the Patient Station Programming screen from the CARE/COM II-E Nurse Call System Main Menu, proceed as follows:

- a. Press the A key. The Patient Station Programming screen will appear.
- b. The cursor will be positioned at the [Z]one field. Using the I key to increment and the D key to decrement, scroll through the range to the zone number to be entered: from 1 64 zones. Press the U key to enter the [U]nit field. Type in the desired zone number, or, using the I and D keys again, scroll through the range to the unit number to be entered: from 1 12 units.

When the zone and unit variables are entered, the system determines if the station identified is INSTALLED or NOT INSTALLED. Consult the data sheets used during system design and configuration to determine the fixed location of the room/station group being identified.

c. When the correct zone and unit number appear on the screen, press the **RETURN** key to register the data in the system.

	NOTE			
	MOIE			
Data typed into the system is not	entered	in the fie	eld, unless i	the RETURN
key is pressed.				

- d. Press the R key. The cursor will move to the Room Number field.
- e. Enter a number from 0 to 99999 to identify the room. Room numbers can be 3, 4, or 5-digit format depending on the style established in *System Programming*. See paragraph 6.2, "Data Input", for more information on determining room number digits.

The room number is displayed on the NCS *Incoming Call Display* and is used by the operator at the NCS to select a specific patient station.

- f. From within the Room Number field, press the directional arrow key (up, down, left or right) or TAB key to move the cursor to the Station Group entry in the field. Identify the station group with a number (1-96).
- g. Using the **TAB** or a directional arrow key, move next to the station group name entry. Using the 16-character alpha-numeric space available, identify the station group by a name previously established.

This name will appear on other programming screens, as well as the Call Assignments menu at the NCS.

h. **TAB** or use the directional arrow key (up, down, left, or right) to move back to the first entry in the field before pressing the letter corresponding to the next field to be entered.

NOTE

Specifying another entry by pressing an alphabetic key within a field will result in the entry being overwritten. The directional arrow keys and **TAB** key are used for maneuvering within a field.

- i. Type N to enter the Name field. Using the 16-character alpha-numeric space available, identify the room by a name previously established.
- j. Using the directional arrow key or **TAB** key, move the cursor to access the [B]ed Number. Type a number from 0 to 49 to identify a bed within the room defined in step e. The numeric value can be translated to an alphabetic value if designated in System Programming.

The room and bed number are used by the attendant at the NCS to select a specific patient station. In a ward, a number of patient stations have the same room number, but bed numbers would vary from 1 to 49. The CARE/COM II-E system will not accept duplicate entry of a room/bed number, the system responds with a visual prompt indicating a duplication error has been avoided.

It is possible to configure a ward application by identifying up to 49 beds in a particular room. It is necessary to re-identify the room as the number desired each time the zone and unit are changed, since the system automatically responds by changing the room based on internal calculations of zone and unit. Once the 12 units in a zone have been established, with each successive unit corresponding to a successive bed number, continue to the next zone number, utilizing the next twelve units, each also identified as a successive bed number, until the desired number of beds is achieved.

The Patient Station Programming screen has two copy functions to aid in the entry of data for the system. The following items are copyable:

	Station Group Number
Q	Patient Names
	Room Numbers
	Bed Numbers

When the cursor is located at one of the listed items:	When	the	cursor	is	located	at	one o	ρf	the	listed	items:
--	------	-----	--------	----	---------	----	-------	----	-----	--------	--------

 $(p_1 \lambda_2 p_2^2 + p_2^2 \lambda_1^2 + p_2^2 \lambda_2^2 + p_2^2 \lambda_2^2 \lambda_2^2 + p_2^2 \lambda_2^2 \lambda_2^2$

- ☐ Press * to copy the displayed value to all 12 stations in the current zone.
- ☐ Press # to copy the displayed value to all stations in the system.
- k. Press the ESC key to exit the Patient Station Programming screen.

6. SYSTEM PROGRAMMING

The System Programming screen is used to enter information that affects the overall operation of the CARE/COM II-E system.

6.1 Field Description Of The System Programming Screen

The [R]oom Number Digits field specifies the number of digits that a nurse has to enter at an NCS to select a specific room number. The number of digits is pertinent to the input of data in the "A" screen-Patient Station Programming. If the Room Number Digits is entered as three, then the range of room numbers entered in Patient Station Programming must be limited to 1 to 999. If a room number 9991 is entered, this room cannot be accessed from the NCS.

[C]all Priority Name specifies the text used for various call levels. This text appears on the NCS when a call is received. Table 1 identifies the typical call level and default text string which appear at a NCS when a call is received.

Table 1. Call Level Text

<u>Level</u>	<u>Nomenclature</u>
1	Code Blue
4	Emergency
5	Patient Call

The 16-character alpha-numeric space available enables the user to type a term which is specific to the use of the call level as applied to the facility.

The [P]age Group field selects the page group programming, as Figure 4 illustrates. Page groups combine a number of page zones and external page zones into logical entities. When an attendant at the NCS performs a page over a page group, the audio is heard over all the selected page zones and external page zones. A page zone consists of twelve (stations) units. There are 64 programmable page zones and four external page zones in the system.

The next field deals with various time-out values. [S]taff Service Overtime Period currently has no application to the CARE/COM II-E system. However, Hold Time-out For Patient Calls, identified in the same field, selects the length of time that a patient station can remain on hold. When there is a hold time-out, the signaling for the station on hold resumes at the NCS.

[D]isplay of Bed Number on the NCS will display the bed number in either numeric or alphabetic display, or allow no display of bed numbers at the NCS.

The [O]ption field selects various options used in the CARE/COM II-E system and makes them available, Y, or disabled, N.

The use of the various options are as follows:

 $\mathbb{C}(\mathbf{r}) = \{ (\mathbf{r}, \mathbf{r}) \in \mathcal{F}_{\mathbf{r}} : \mathbf{r} \in \mathcal{F}_{\mathbf{r}} \} \subseteq \mathcal{F}_{\mathbf{r}} \}$

Tone Mute Allows the attendant at the NCS to silence the tone

signaling of a non-cancelable call.

24 Hour Time Format Display the time of day in a 24 hour format at all

NCSs, rather than the default 12 hour format.

Page Beep Tone Produces a single alert beep to all paged items when

the NCS pages a zone, page group, or page all

NCSs.

Station Beep Tone Produces a single alert beep at a patient station when

the NCS makes a call to the patient station.

Retain Call Priority Used for the display of calls at a NCS. When set to

Y in programming, calls stay at their assigned priority regardless if they are already answered or put on HOLD. When set to N, calls answered at another NCS, or put on HOLD, are lowered in priority, allowing unanswered high priority calls to rise to the top of the NCS *Incoming Call Display*/

Function Menu.

Automatic Call Answer Allows the attendant at the NCS to connect with a

call automatically when lifting the handset, no keys

are needed.

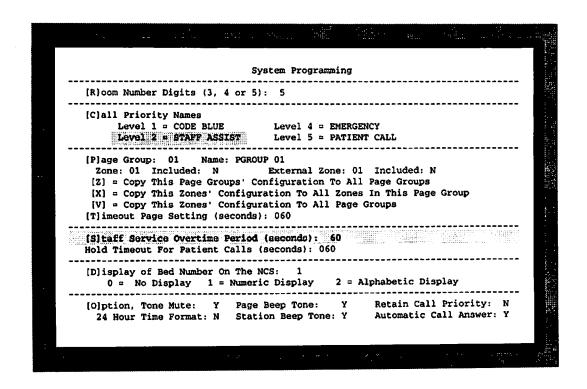


Figure 4. Menu B - System Programming

6.2 Data Input

To access the System Programming screen from the CARE/COM II-E Nurse Call System Main Menu, proceed as follows:

- a. Press the B key. The System Programming screen will appear.
- b. The cursor will be positioned in the [R]oom Number Digits field.

Consult the data sheets used during system design and configuration to determine how the facility intends to identify room numbers, with 3, 4, or 5 digits.

- c. Type in a value of 3, 4, or 5.
- d. When the correct variable is reflected on the screen, press the RETURN key to register the data in the system.

NOTE -
Data typed on the screen is not entered into the system until the RE-
TURN key is pressed.

- e. Press the C key to enter the [C]all Priority Names field. Using the 16-character alpha-numeric space available, identify Level 1 with the nomenclature determined to best suit the facility. Use the directional arrow key (up, down, left or right) or TAB key to move the cursor to Level 4 and Level 5, and type that nomenclature as well. When Levels 1, 4, and 5 have been defined, press the RETURN key to register this data.
- f. Press the P key to move the cursor to the [P]age Group field.
- g. Type in a number 1 64 to specify the page group.

- h. Using the directional arrow key (up, down, left or right) or **TAB** key, move the cursor to the "Name" entry in the [P]age Group field. Identify the page group by name, typing up to 16 alpha-numeric characters.
- i. Using the directional arrow key (up, down, left or right) or **TAB** key, move to the Zone and External Zone entries.

HOIE
Specifying another entry by pressing an alphabetic key within a field,
unless the entry is specifically identified by a letter in brackets, will result
in the entry being overwritten. The directional arrow keys or TAB key are
used for maneuvering within a field.

j. At the zone entry, type the number of the zone (1 - 64) to be included in the page group. Using the directional arrow key or TAB key, move to the "Included" location. To specify the zone as included in the page group, press Y for yes. Press the TAB key to move to the External Zone entry. Type the number of the external zone (1 - 4) to be included in the page group. Move to the "Included" location. To specify the external zone as included in the page group, press Y.

Repeat step j. for each zone and/or external zone to be included in the page group.

k. To use the copy functions, move to the Zone or External Zone numeric entry and press either the Z, X, or V key.

To help in the entry of repetitive data, three copy functions are provided.

The [Z] copy function takes all zone and external zone configuration for the currently selected page group, and copies the value to all page groups.

☐ The [X] copy function takes the currently selected zone or external zone value and copies it to all 64 zone values in the current page group.

The [V] copy function takes the currently selected zone or external zone value and copies it to all 64 page groups.

NOTE

Data typed on the screen is not entered into the system until the **RE-TURN** key is pressed.

- 1. Press the T key to move to the [T]imeout Page Setting in the Page Group field. Enter a value from 1 to 255 to specify the maximum number of seconds an attendant can stay on a page at the NCS.
- m. Press the S key to move the cursor to the [S]taff Service Overtime Period field. Although this entry is currently not used in this application, you will need to access this field to perform the next step.
- n. Press the down arrow key to move to the Hold Time-out For Patient Calls entry.
- o. Enter a value from 1 to 255 in this position to specify the length of time (in seconds) for a patient station to remain on hold. Press RETURN to register this value in the system memory.
- p. Press the **D** key for [D]isplay of Bed Numbers On the NCS. The cursor will move to the field indicated.
- q. Enter a 0, 1, or 2 to display the bed number on the NCS as a numeric or alphabetic value, or choose not to display the bed number at all.

r.	Move next to the [O]ption field, using the O key. Using the arrow
	directional keys (up, down, left or right), move to each option and press
	Y to enable the feature system wide, or N to disable the feature system
	wide.

NOTE	
These options pertain to the CARE/COM	II-E system as a whole, they are
not programmed to individual NCSs.	

When Retain Call Priority is set to 'N', calls answered at another NCS, or put on HOLD, are lowered in priority, allowing unanswered calls to rise to the top of the NCS *Incoming Call Display/Function Menu*.

With Retain Call Priority set to 'Y', calls stay at their assigned priority regardless if they are already answered or put on HOLD.

s. Press the ESC key to exit the System Programming screen.

7.

SYSTEM STATUS MONITOR View only

This screen is used to monitor the status of calls and signaling from a patient station, no programming is required. As calls are received from patient stations, the status of the calls are displayed on the C screen.

7.1 Field Description Of The System Status Monitor

		,
		The display of each call has a number of items of information associated with it:
		PSN displays the patient station number of the calling station. This is a value from 1 to 768. Ann - Control gives 80124
		□ Room shows the current room number (1 - 999, 1 - 9999, or 1 - 99999, based on 3, 4, or 5-digit format). Bd shows the bed number (1 - 49).
	ronu	☐ Zn displays the zone number of the patient station. The zone number ranges from 1 - 64.
d. Talk	Pall 7	\square NCS shows the number of the NCS, if any, currently communicating with the patient station. The NCS number is from 1 - 32.
		\square Display is a bit-mapped mask indicating on which NCSs this call will appear.
		\Box 'A' indicates the annunciator line on which this call appears: (1) or (2).
		☐ 'S' is the numeric value for the signal level. Signal Level displays the call priority text as defined in the [C]all Priority Name field of the <i>System Programming</i> screen.
		☐ 'C' is the call level for this call record.
		☐ 'H' displays the HOLD level for this call record.
		☐ 'M' will show a one (1) when a call is put on tone mute.
		• 'Pr' is a display of the call priority level for this call record.
		☐ 'Sg' selects station group assigned to that patient station.
		☐ 'St', 'Sch' and 'Cr' are functions currently not used.
		The bottom of the display shows values which indicate the performance of the system.

7.2 Accessing the System Status Monitor Screen

To access System Status Monitor from the CARE/COM II-E Nurse Call System Main Menu, proceed as follows:

- a. Press the C key. The System Status Monitor screen will appear.
- b. Using the directional arrow keys, scroll through station information.
- c. Press the S key to toggle the display to show the calls sorted by priority.
- d. Press the S key a second time to revert to the display of calls as received.
- e. Press the ESC key to exit the System Status Monitor screen.

The information is normally displayed as received with each new call appearing under existing calls.

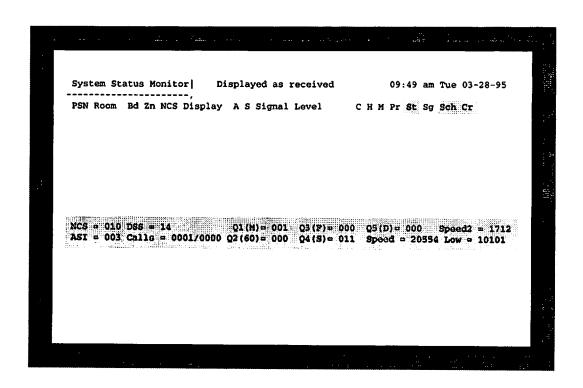


Figure 5. Menu C - System Status Monitor

8. BACKUP PROGRAM MEMORY



The CARE/COM II-E Nurse Call System has a utility which permits the system configuration to be saved on a storage device, generally a disk drive on a personal computer. The saved configuration can then be reloaded at a later time. See Figure 6 for the configuration of the *Backup* screen.

8.1 Accessing The Backup Program Memory Screen

To access the *Backup Program Memory* screen from the *CARE/COM II-E Nurse Call System Main Menu*, proceed as follows:

a. Press the D key. The Backup Program Memory screen will appear.

With the storage device (personal computer) connected to the system, proceed as follows:

b. Press the C key to save the CARE/COM II-E memory, or the R key to restore memory.

The system is ready to begin transmitting (or receiving) the desired configuration.



When the CARE/COM II-E programming is restored after defaulting, the system must be reset immediately after the restore is complete. Otherwise, the system continues to use the configuration that was present before the restore operation. This can cause erratic operation within the system.

c. Press the ESC key, or any other character than those identified on the screen, to exit the Backup Program Memory screen.

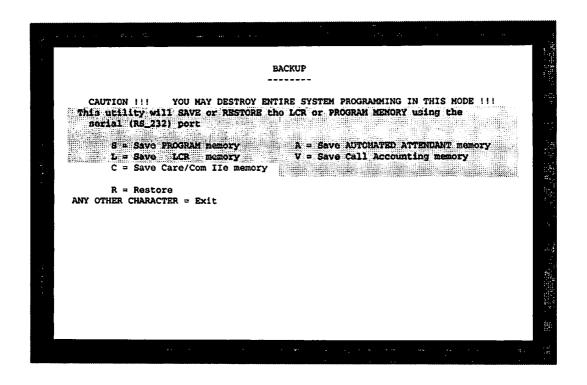


Figure 6. Menu D - Backup

8.2 Remotely Accessing The Backup Program Memory Screen

Using a personal computer with suitable communications software and a modem, you are able to call the system and connect with the modem. The system's modem supports either 300 or 1200 baud. The system uses Xmodem protocol to send/receive system configuration.

- a. Using a communication software package, remotely access the *Main Menu*.
- b. Once the connection is established, press the ESC key. The system prompts for a password. Enter the appropriate password. The *Main Menu* appears.

- c. From the Main Menu, press the H key. The CARE/COM II-E Nurse Call System Main Menu will appear.
- d. Press the D key. The Backup Program Memory screen will appear.
- e. Press the C key to save the CARE/COM II-E memory, or the R key to restore memory.

The system is ready to begin transmitting (or receiving) the desired configuration.

When a new system is initially configured, or changes are made to an existing system, the system information should be downloaded to disk. The disk should be labeled and dated to ensure the most up-to-date information is kept on-hand.

NOTE

When the CARE/COM II-E programming is restored after defaulting, the system must be reset immediately after the restore is complete. Otherwise, the system continues to use the configuration that was present before the restore operation. This can cause erratic operation within the system.

f. When the save or restore procedure is completed, press the ESC key to exit the *Backup Program Memory* screen.

9. EXIT C/C IIE MAIN MENU

To exit from the CARE/COM II-E Nurse Call System Main Menu, press the E key. The screen returns to the system Main Menu.

10. SYSTEM CONFIGURATION

The System Configuration screen is used to change device numbers, and view the status of such devices in the CARE/COM II-E system. The central portion of the display contains the information regarding the devices that are attached and the number associated with each device. Once the system is fully configured and installed, the devices will automatically appear on the screen by virtue of being plugged in. However, it may be necessary to change device identification.

10.1 Display Description Of The System Configuration Screen

Viewing the screen in columns, as <u>Figure 7</u> indicates, the first column on the left-hand side of the screen lists the number of cards. CARE/COM II-E has a maximum capacity of four "cards":

card	01	4 x 8	Main Control Unit board (36100-1)
card	02	2 x 4	Expansion card (23120)
card	03	4 x 8	Expansion board (36200-1)
card	04	4 x 8	Expansion Card (23220)

The next column indicates the type of card installed; dashes indicate no card is installed in this position.

The beginning port number for each card is identified next. Across the top of the display is the relative offset for each port on a given card. Only eight of the possible twelve ports (on a 4 x 8 card) are displayed, since the CARE/COM II-E system only uses the station ports for Nurse Control Station (NCS), Direct Station Selection (DSS) console, and Analog Station Interface (ASI) installation.

There are a maximum of 28 ports available in which a combination of ASIs, NCSs, and DSSs can be installed. ASIs are identified with two numbers, such as (Z1-2), which indicates the first and second zones associated with this ASI. NCSs are indicated as NCS##, and DSSs indicated as DSS##. Dashes indicate a device plugged in but not recognizable to the system. Starting with a defaulted system, each device attached to the configuration receives the next number available for that device. The first NCS will be NCS01, the second NCS will be NCS02, and so on.

For identification of devices, ASIs begin with an odd number (from 1 to 63), indicating the zone number. There are 32 possible NCS numbers (from 1 - 32), or 16 DSS numbers (from 1 - 16) allowed in the system. The system will prevent the user from entering duplicate device numbers. Bear in mind, the number of ports available determines the maximum number of devices which can be installed.

Optional function keys:

A Auto Configuration This will cause devices that were previously at-

tached to the system, but not currently attached, to be deleted from the configuration. All remaining attached devices will be renumbered from the top

left to the bottom right.

C Clear Port Clears (deletes) the device number displayed where

the cursor is located.

F Default Configuration All devices, attached or not, will be renumbered

from the top left to the bottom right.

R Reset Port Resets the device currently pointed at by the cursor.

L Reset and Load Resets the NCS, and downloads the text messages

used for the display. This command works for NCSs

only.

10.2 Data Input

NCS Port

To access the System Configuration screen from the CARE/COM II-E Nurse Call System Main Menu, proceed as follows:

- a. Press the F key. The System Configuration screen will appear.
- b. Using the directional arrow key (up, down, left or right) or **TAB** key, move the cursor to the desired device to be changed.
- c. Press the C key to clear the existing device number.
- d. Type in a new device number. Press **RETURN** to register the information in the system memory.

NOTE	
Data typed on the screen is not entered into the system until the RE-	
TURN key is pressed.	

Device Character.

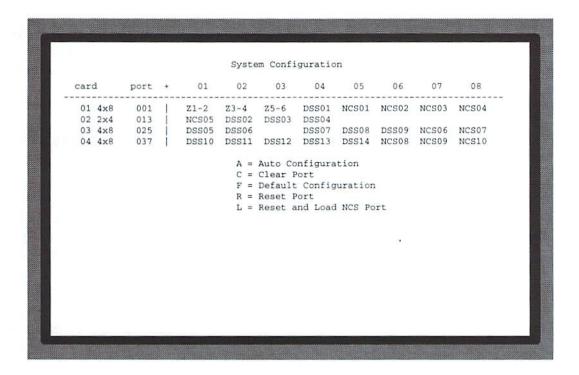


Figure 7. Menu F - System Configuration

To Use the Optional Function Keys:

- Pressing A and a Y at the prompt will cause the system to perform an auto-configuration.
- Pressing F and a Y at the prompt will cause the system to perform a default configuration.
- ☐ Pressing **R** and a **Y** at the prompt will cause the device currently pointed to by the cursor, to be reset.
- ☐ Pressing L and a Y at the prompt will cause the NCS currently pointed to by the cursor, to be reset and the text messages used for the display to be downloaded.
- e. Press the **ESC** key to exit the *System Configuration* screen.

11. NURSE CONTROL STATION PROGRAMMING

The Nurse Control Station Programming screen is used to change the various default settings for the NCS. Much of the information needed to make the NCS perform to its optimum capacity is determined in the Nurse Control Station programming.

11.1 Field Description Of The Nurse Control Station Programming Screen

The N[C]S Number field is used to select the NCS for modification. The port number automatically updates for the installed NCS when the NCS is identified. Also within the N[C]S Number field is the [L]ocation Name, which allows the user to identify the chosen NCS with a 16-character alpha-numeric text label, determined during system configuration. This text appears at a NCS whenever a call originates from this NCS, or the # key is pressed at an idle NCS.

The programmable keys section of the screen is selected in the [K]eys field, as Figure 8 illustrates. There are eight programmable keys on the NCS. The space within brackets is used to enter the key code, determining the function you wish the key to perform. The sub-key code is entered in the space to the right of the bracket. The sub-key code further specifies which zone, page group, or NCS will be performing the function identified for that programmable key. See Table 2 for more information on Key Code summaries.

Figure 8. Menu G - Nurse Control Station Programming

2 NCS - 1 Ward Cleak.

Table 2. Key Code Summary for the NCS and DSS Console

	Key Code	Sub-Key Code	Description
Bed &	500-549	1 - 99999	The key code is the bed number
	501 Bul #1	(235) - Rm 235	(last 2 digits equals the bed number) The sub-key code is the room number
	550	0	Page all NCSs
	550	1 - 64	Page a Zone
	551	1 - 64	Page a Page Group
	552	1 - 4	External Page
	555	1 - 64	Monitor a Zone
	556	1 - 64	Monitor a Page Group
	560	0	Call a NCS - dial NCS #
	560	1 - 32	Call a NCS- direct
	565	0	Off-Duty - dial NCS #
	565	1 - 32	Off-Duty - direct to NCS
	570	0	Nurse Service key - no current use
	570	1	Aide Service key - no current use

The Keys field has two copy functions to aid in the entry of data in the system. Both the key code and the sub-key code are copied to other NCSs in the system.

[*] Copy This Key To All NCSs Used to copy one key code and sub-key code to all NCSs.

[#] Copy All Keys To All NCSs Used to copy all key codes and sub-key codes to all NCSs.

The next field, Station [G]roup, provides the basis for performing such functions as Call Assignments, Swing Groups, Share Groups, and Off-Duty. The Station [G]roup field identifies the station groups which are available and/or assigned to the NCS identified in the first field. When the station group is assigned, it allows the NCS to communicate with all the stations in the station group. A NCS may have station groups that are available, but not assigned. However, a NCS cannot have station groups assigned unless they are available to that NCS.



By default, the system software ensures complete communication coverage in the following ways:

- Any call placed from an unassigned patient station will be sent to all NCSs
- Any NCS can initiate a call to any patient station in the system
- Calls directed only to a defective or unplugged NCS will be re-routed to all NCSs

Like the [K]ey field, there are copy functions provided to help in the entry of repetitive data, they are:

[Z] Copy This NCS's Group Configuration to all NCS's Used to take all station group values for the selected NCS and copy the values to all

NCSs.

[X] Copy This Groups' Configuration to All Groups On This NCS Used to take the currently selected station group value and copy it to all station group

values in the NCS.

[V] Copy This Groups' Configuration to All NCS's

Used to take the currently selected station group value and copy it to all NCSs'.

11.2 Data Input

To access the Nurse Control Station Programming screen from the CARE/COM II-E Nurse Call System Main Menu, proceed as follows:

- a. Press the G key. The Nurse Control Station Programming screen will appear.
- b. The cursor will be positioned in the N[C]S Number field.
- Type in a number from 1 32, or press the I key to increment or D key to
 decrement to the desired number, to identify the NCS to be programmed.
- Press RETURN to register the information in the system memory.

NOTE	
Data typed on the screen is not entered into the system until the I TURN key is pressed.	RE-

The port will automatically update as the NCS number changes.

- e. Press the L key, within the same field, to enter the [L]ocation Name. Identify the Location Name with up to 16 characters, as previously determined during system configuration.
- f. Using the directional arrow key (up and down) or **TAB** key, move back to the N[C]S Number Field. Press the **K** key. The cursor will move to the [K]eys field.

Refer to <u>Table 2</u> for key codes and descriptions. Consult the data sheets, found in <u>Appendix A</u>, to determine which key will be programmed with what specific function.

- g. Type in a key code, or use the directional arrow key (right or left) to scroll through the available code choices.
- h. Press the S key to modify the sub-key code for a given key. The cursor will move to the sub-key area.
- i. Type in a key code.
- j. Press RETURN to register the information in the system memory.
- k. Using the directional arrow key (up or down) or **TAB** key, move to the next key code area and repeat steps g. j. to enter the key code and sub-key code for each of the remaining programmable keys.

To make programming of the keys easier, use the optional function keys:

- ☐ Press the * key at the prompt to copy one key code and sub-key code to all NCSs.
- ☐ Press the # key at the prompt to copy all key codes and sub-key codes to all NCSs.
- 1. Press the G key. The cursor will move to the Station [G]roup field.
- m. Type in a number from 1 96, or press the I or D key to scroll to the desired number, to identify the station group.
- n. Using the directional arrow key (up, down, left or right) or **TAB** key, move the cursor to the Name entry.
- o. Type in a 16-character alpha-numeric text to identify the Station Group.

p. Using the down directional arrow key, move to the Available/Assigned area of the Station [G]roup field.

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- q. Type a Y (for yes) or N (for no) to make this station group Available to the NCS identified in the first field.
- r. Using the down arrow again, move to the Assigned area of the Station [G]roup field.
- s. Type a Y or N to have this station group Assigned to the NCS identified in the first field.

A station group which is not Available, cannot be Assigned.

- t. Press the RETURN key to register the information in the system memory.
- u. Repeat steps 1. t. to identify the station groups available/assigned to the NCS determined in the first field.

To make programming of the NCS and station group information easier, use the optional function keys:

- ☐ Place the cursor in the group field, press the **Z** key at the prompt to Copy This NCSs' Group Configuration To All NCS's.
- ☐ Place the cursor in the group field, press the X key at the prompt to Copy This Groups' Configuration to All Groups On This NCS.
- ☐ Place the cursor in the group field, press the V key at the prompt to Copy This Groups' Configuration To All NCS's.
- v. Press the ESC key to exit the *Nurse Control Station* programming screen.

12. DIRECT STATION SELECTION PROGRAMMING

On the CARE/COM II-E system, the *Direct Station Selection Programming* screen is used to change the various default settings for the DSS console.

12.1 Field Description Of The Direct Station Selection Programming Screen

The top part of the screen, the DSS [N]umber, is used to select the DSS for modification, as shown in Figure 9. The port number automatically updates for the installed DSS console. Up to two DSS consoles can be attached to a given NCS.

The [K]eys section of the screen functions the same as the programmable keys section of the *Nurse Control Station* programming screen. However, on the DSS, there are 48 keys available to program, per console. Refer to <u>Table 2</u> for a summary of Key Codes and Sub-Key Codes used for the NCS and DSS consoles.

```
Direct Station Selection Programming
DSS [N]umber 12 port 39
                                                   time 09:49 am Tue 03-28-95
[A]ttached to NCS 01 STN 01
                     500-549/0-99999 Bed #/Room #
[K]eys 01
          HELP
                   [ 0501 ] [ 0501 ] [ 0501 ] [ 0501 ] [ 0501 ]
 [ 0501 ] [ 0501 ]
            00002
                      00003
                               00004
                                         00005
                                                   00006
                                                            00007
                                                                      80000
 00001
                     [ 0501 ] [ 0501 ] [ 0501 ] [ 0501 ] [ 0501 ]
           [ 0501 ]
                                                                     [ 0501 ]
 [ 0501 ]
                                                            00015
                                                                      00016
                                                   00014
 00009
            00010
                      00011
                               00012
                                         00013
                                                                     [ 0501 ]
 [ 0501 ]
           [ 0501 ]
                     [ 0501 ] [ 0501 ]
                                        [ 0501 ]
                                                  [ 0501 ] [ 0501 ]
 00017
            00018
                      00019
                               00020
                                         00021
                                                   00022
                                                            00023
                                                                      00024
                                                  [ 0501 ] [ 0501 ]
           [ 0501 ]
                     [ 0501 ] [ 0501 ]
                                        [ 0501 ]
                                                                      [ 0501 ]
 [ 0501 ]
 00025
            00026
                      00027
                               00028
                                         00029
                                                   00030
                                                            00031
                                                                      00032
                                        [ 0501 ]
                                                  [ 0501 ] [ 0501 ]
                                                                     [ 0501 ]
           [ 0501 ]
                     [ 0501 ] [ 0501 ]
 [ 0501 ]
                                                            00039
                                                                      00040
                                         00037
                                                   00038
 00033
            00034
                      00035
                               00036
                                                                     [ 0501 ]
                                        [ 0501 }
 [ 0501 ]
                                                  [ 0501 ] [ 0501 ]
           [ 0501 ]
                     [ 0501 ] [ 0501 ]
  00041
            00042
                      00043
                               00044
                                         00045
                                                   00046
                                                            00047
                                                                      00048
       [*] = Copy This Key To All DSS's
                                           [#] = Copy All Keys To All DSS's
       [+] = Increment Subcode From Here To End
```

Figure 9. Menu H - Direct Station Selection Programming

The keys field has two copy functions to aid in the entry of repetitive data in the system. Both the key code and sub-key code are copied to other DSSs in the system. The copy functions are:

[*] Copy This Key
To All DSS's

Used to copy one key code and sub-key

code to all DSSs in the system.

[#] Copy All Keys
To All DSS's

Used to copy all key codes and sub-key

codes to all DSSs in the system.

There is also a special function key:

[+] Increment Subcode From Here to End

Automatically increments subcodes from the point of the prompt to the last key.

12.2 Data Input

To access the Direct Station Selection Programming screen from the CARE/ COM II-E Nurse Call System Main Menu, proceed as follows:

- a. Press the H key. The *Direct Station Selection Programming* screen will appear.
- b. The cursor will be positioned at the DSS [N]umber field.
- c. Type in a number from 1 16, or use the I key to increment or D key to decrement, to identify the DSS console to be programmed. The port will automatically update as the DSS number changes.
- d. Within the same field, press the A key. The cursor will move to the [A]ttached to NCS entry.
- e. Type in a NCS number, from 1 -32, the DSS will attach to.

A DSS console does not plug into a NCS, it is a stand-alone device.

However, once the DSS is "attached" to a NCS in DSS programming, all keys pressed on this DSS console will appear to have been pressed by

the selected NCS.

-	NOTE -			
Data t	Data typed on the screen is not registered into the system until the RETURN key is pressed.			
g.	Press the K key. The cursor will move to the code of the first program-mable key in the [K]eys field.			
Refer t Append function	o <u>Table 2</u> for key codes and descriptions. Consult the data sheets, found in $\underline{dix A}$, to determine which key will be programmed with what specific on.			
h.	Type in a key code, or use the directional arrow key (right or left) to scroll through the available code choices.			
i.	Press the S key to modify the sub-key code for a given key. The cursor will move to the sub-key area.			
j.	Type in a key code, or use the right or left directional arrow key to scroll through the available code choices.			
k.	Press RETURN to enter the information in the system memory.			
1.	Using the directional arrow key (up or down) or TAB key, move to the next key code area and repeat steps h k. to enter the key code and sub-key code for each of the remaining programmable keys.			
To ma keys:	ke programming of the keys easier, use the optional copy and function			
(☐ Press the * key at the prompt to copy this key to all DSS's.			
(☐ Press the # key at the prompt to copy all keys to all DSS's.			
(☐ Press the + key at the prompt to increment subcode from this prompt to the last key.			
m.	Press the ESC key to exit the <i>Direct Station Selection Programming</i> screen.			

13. LISTINFORMATION

In the CARE/COM II-E system programming, the *List Information* screen provides a list of available information screens that the user can access, as shown in Figure 10. Each of the sub-screens compiles a summary of information, entered in various programming functions. There is no programming required in these screens.

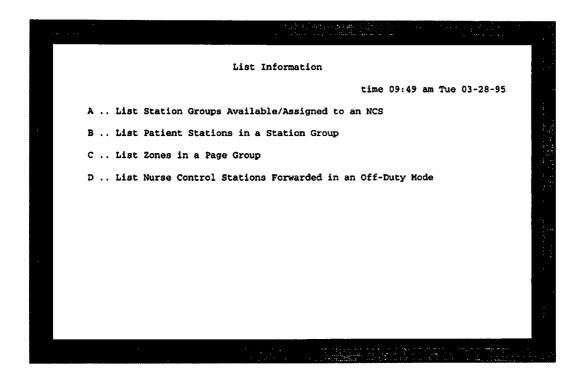


Figure 10. Menu I - List Information

To access the List Information screen from the CARE/COM II-E Nurse Call System Main Menu, proceed as follows:

- a. Press the I key. The List Information screen will appear.
- b. Press the letter for the list of information you wish to access.
- c. Press the I key to present the next page of information, or the D key to present the previous page of information if the screen contains a multipage display.
- d. Press the ESC key to exit the List Information screen.

[A] List Station Groups Available/Assigned to a NCS- This is a multi-page screen which shows the station group numbers available, and those assigned to each of the NCSs. Refer to Figure 11 to view the list of station groups available and assigned to the NCS.

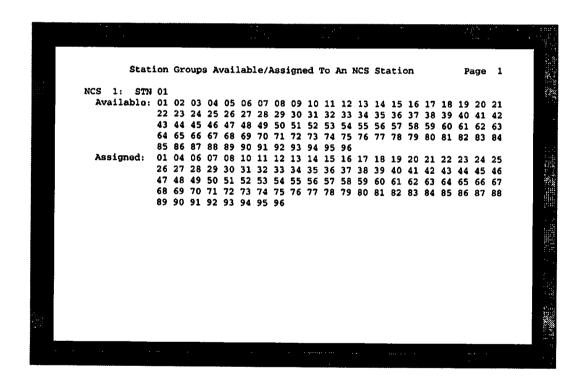


Figure 11. List Information - Station Groups Available/Assigned to an NCS Station

[B] List Patient Stations in a Station Group- This is a multi-page screen which shows the zone, unit, room number and bed number for each station in a station group as seen in Figure 12.

```
Patient Stations In A Station Group
                                                                      Page 1
Station Group 01: STATION GROUP 01
Zn-Un-Room#-Bd Zn-Un-Room#-Bd Zn-Un-Room#-Bd Zn-Un-Room#-Bd Zn-Un-Room#-Bd
01-01-00001-01 01-02-00002-01 01-03-00003-01 01-04-00004-01 01-05-00005-01
01-06-00006-01 01-07-00007-01 01-08-00008-01 01-09-00009-01
                                                               01-10-00010-01
01-11-00011-01 01-12-00012-01
                               02-01-00013-01 02-02-00014-01
                                                               02-03-00015-01
02-04-00016-01 \quad 02-05-00017-01 \quad 02-06-00018-01 \quad 02-07-00019-01 \quad 02-08-00020-01
02-09-00021-01 02-10-00022-01
03-02-00026-01 03-03-00027-01
                               02-11-00023-01 02-12-00024-01
                                                               03-01-00025-01
                               03-04-00028-01 03-05-00029-01 03-06-00030-01
                               03-09-00033-01 03-10-00034-01
                                                               03-11-00035-01
03-07-00031-01 03-08-00032-01
03-12-00036-01 04-01-00037-01
                               04-02-00038-01 04-03-00039-01
                                                               04-04-00040-01
04-05-00041-01 04-06-00042-01 04-07-00043-01
                                               04-08-00044-01
                                                               04-09-00045-01
04-10-00046-01 04-11-00047-01
                               04-12-00048-01 05-01-00049-01
                                                               05-02-00050-01
05-03-00051-01 05-04-00052-01 05-05-00053-01 05-06-00054-01
                                                               05-07-00055-01
05-08-00056-01 05-09-00057-01 05-10-00058-01 05-11-00059-01
                                                               05-12-00060-01
06-01-00061-01 06-02-00062-01 06-03-00063-01 06-04-00064-01
                                                               06-05-00065-01
                                               06-09-00069-01
                                                               06-10-00070-01
06-06-00066-01 06-07-00067-01 06-08-00068-01
                                                               07-03-00075-01
06-11-00071-01 06-12-00072-01 07-01-00073-01 07-02-00074-01
07-04-00076-01 07-05-00077-01 07-06-00078-01 07-07-00079-01
                                                               07-08-00080-01
07-09-00081-01 07-10-00082-01 07-11-00083-01 07-12-00084-01
                                                               08-01-00085-01
08-02-00086-01 08-03-00087-01 08-04-00088-01 08-05-00089-01
                                                               08-06-00090-01
```

Figure 12. List Information - Patient Stations in a Station Group

- [C] List Zones in a Page Group- This is a multi-page screen which will show the zones that are part of the programmed page group. The screen is not illustrated.
- [D] List Nurse Control Stations Forwarded in an Off-Duty Mode- This is a single screen which will identify the status of all NCSs, whether the NCS is active, not installed, or transferred to another NCS. Figure 13 lists all NCSs in the system, and their status at the time the list was printed.

	NCS Forwar	rded In Off Duty Mod	9	
NCS Number	Status	NCS Number	Status	
1	Active	2	Active	
3	Active	4	Active	1
5	Active	6	Active	
7	Active	8	Active	
9	Transferred	10	Active	
11	Not Installed	12	Not Installed	
13	Not Installed	14	Not Installed	
15	Not Installed	16	Not Installed	
17	Not Installed	18	Not Installed	
19	Not Installed	20	Not Installed	
21	Not Installed	22	Not Installed	
23	Not Installed	24	Not Installed	
25	Not Installed	26	Not Installed	
27	Not Installed	28	Not Installed	
29	Not Installed	30	Not Installed	
31	Not Installed	32	Not Installed	

Figure 13. List Information - NCS Forwarded in Off Duty Mode

14. ROOM NUMBER DISPLAY

The Room Number Display screen compiles the information entered in various programming screens, and arranges the information specific to a particular room number. This screen is convenient in that it provides a variety of programming information assembled at one screen, as shown in Figure 14.

14.1 Display Description Of The Room Number Display Screen

Zone	Identifies the zone number of the patient station, from 1 to 64.
Unit	Identifies the unit number of the station within the zone, from 1 to 12.
PS_NUM	System generated number.
Bed	Identifies the bed numbers associated with this patient station.
Sta_Group	Identifies the station group number to which this patient station belongs.
Search	Function not used this release.

14.2 Data Input

To access the Room Number Display screen from the CARE/COM II-E Nurse Call System Main Menu, proceed as follows:

- a. Press the J key. The Room Number Display screen will appear.
- b. The cursor will be positioned at the Room Number Display Enter Room Number entry.
- c. Type in a room number at the cursor, press the RETURN key.

The display will update to show the patient stations programmed with that room number.

d. Press the ESC key to exit the Room Number Display screen.

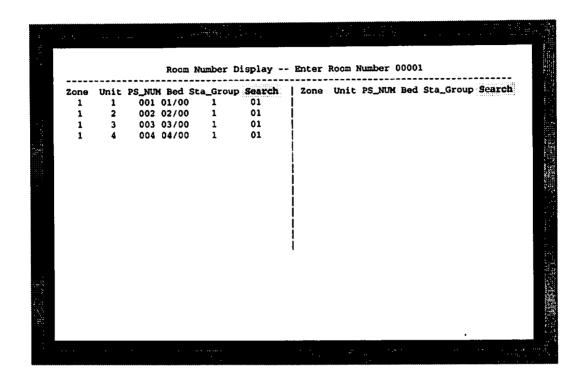


Figure 14. Menu J - Room Number Display

15. NAPI STATUS MONITOR

Currently not used in this release.

16. ADDITIONAL SYSTEM PROGRAMMING

The Additional System Programming screen is used to enter system battery information and additional programming information.

16.1 Field Description of the Additional System Programming Screen

The HCP CO Battery Monitor field is used to program the number of the CO (found on the auxiliary panel) which the molex connector from the Power Status Line plugs into. The HCP CO identifies both the Main Control and Expansion Unit CO port. The default [M]ain HCP CO is 4, and 0 for an Expansion Unit. However, the number entered should correspond to the physical port occupied by the molex connector.

When the CO port is programmed, a SERVICE indication will appear on the nurse control station if a loss of AC power should occur to the Main Control Unit and/or Expansion Unit. For more information on SERVICE indication and the operation of the Problem Report, refer to the *User Guide* or <u>Section 200</u> of the *CARE/COM II-E Technical Manual*.

	NOTE	
The ports identified in Additional	System	Programming are CO only.

The [T]imeout for Menus on NCS (seconds) field determines the length of time the NCS screen will display before it returns to an idle screen, as <u>Figure 15</u> illustrates. The NCS menu time-out ranges from 1 - 99 seconds, but defaults at 20 seconds.

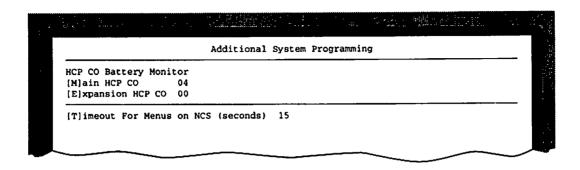


Figure 15. Menu L - Additional System Programming

16.2 Data Input

To access the Additional System Programming screen from the CARE/COM II-E Nurse Call System Main Menu, proceed as follows:

- a. Press the L key. The Additional System Programming screen will appear.
- b. The cursor will be positioned in the [M]ain HCP CO field. If the molex connector is plugged into the default CO, port 4, no action is required. If the connector occupies a port other than 4, type in a number from 1 6, or press the I key to increment or D key to decrement to the desired number, to identify the CO port occupied.
- c. Press the E key within the same field if an Expansion unit is installed in this system. The cursor will move to the [E]xpansion HCP CO entry.
- d. Type a number 7 14, or press the I or D key to scroll to the number corresponding to the CO port occupied by the power status line on the Expansion Unit (if installed).

The default is 0 if an Expansion Unit is not installed.

e. When the correct port numbers are determined and the information is reflected on the screen, press the **RETURN** key to register the data in the system.

NOTE

Data typed into the system is not entered in the field, unless the **RE-TURN** key is pressed.

- f. Press the T key to move the cursor to the [T]imeout for Menus on NCS field.
- g. Type in a number, from 1 99, to specify the amount of time a menu will appear on a NCS before returning to an idle screen.
- h. Press the ESC key to exit the Additional System Programming screen.

16.3 Verifying Battery Status on the Main Menu

Once the CO port monitoring power/battery status has been programmed in the CARE/COM II-E Nurse Call System Main Menu - Additional System Programming, it may be necessary to go to the Main Menu to verify the information. A technician providing remote service to the system may also want to access the Main Menu to determine whether the system is operating on main power or on an alternate power source.

There are three menus in the *Main Menu* which can provide the technician with this information. These menus include:

- ☐ Menu C System Status Monitor
- ☐ Menu F System Configuration
- ☐ Menu I Line Maintenance

Main Menu - System Status Monitor

a. From the *Main Menu*, enter the letter corresponding to the screen for the function to be performed. In this instance, press the C key, the *System Status Monitor* screen will appear.

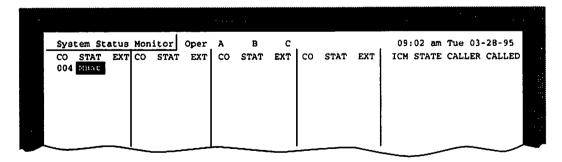


Figure 16. Main Menu C - System Status Monitor

The cursor will appear in the first column, indicating CO, STAT (status), and EXT (extension). The CO is identified as 004; this information corresponds to the CO programmed in Additional System Programming of the CARE/COM II-E Nurse Call System Main Menu. The reverse video of MBat, as seen in Figure 16, indicates the system is no longer operating on main power, but has transitioned to the alternate power source.

An Expansion Unit installed on the system would appear as EBat for status, with the port number identified under CO. If the Expansion Unit was running on battery backup, the EBat would appear in reverse video.

Main Menu - System Configuration

a. From the *Main Menu*, enter the letter corresponding to the screen for the function to be performed. In this instance, press the **F** key, the *System Configuration* screen will appear.

The System Configuration screen in the Main Menu is similar to the System Configuration screen in the CARE/COM II-E Nurse Call System Main Menu. However, the F screen of the Main Menu displays both station and CO ports.

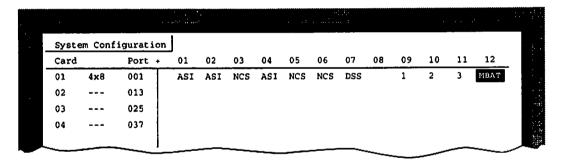


Figure 17. Main Menu F - System Configuration

On a 4 x 8 card, indicated in Figure 17, the first eight ports represent the ASI and NCS connections (as well as DSS when installed). The ninth through twelfth port indicate COs. In this instance, port 12 is occupied by MBAT (Main Control Unit battery) shown in reverse video. Reverse video on the System Configuration screen denotes the system has transferred to the alternate power source, just as reverse video indicates alternate power in the System Status Monitor screen.

The CO determined as 4 in the Additional System Programming screen of the CARE/COM II-E Nurse Call System Main Menu physically relates to the twelfth port of the system (8 station + 4 CO = 12). If the CO was determined as 3 in the Additional System Programming screen, the System Configuration screen of the Main Menu would show port 11 occupied by MBAT or EBAT (Expansion Unit).

Main Menu - Line Maintenance

a. From the *Main Menu*, enter the letter corresponding to the screen for the function to be performed. In this instance, press the I key, the *Line Maintenance* screen will appear.

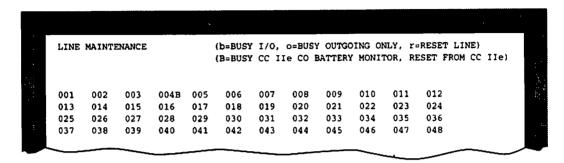


Figure 18. Main Menu I - Line Maintenance

The B appears with 004, the CO determined in Additional System Programming of the CARE/COM II-E Nurse Call System Main Menu supervising power status. The capital B is used to signify a CARE/COM II-E CO only. This CO can only be reset from the CARE/COM II-E - Additional System Programming screen. A maximum CARE/COM II-E system currently utilizes fourteen COs, the remainder indicated in Figure 18 are available for future use.

Section 550 - Pocket Page Programming

1. GENERAL

The pocket page system requires initial system setup, via a programming terminal, prior to the system functioning. The information the system requires, such as staff coverage, pager assignments, etc., is programmed under password protection by a certified technician. The information entered in the *Pocket Page Menu* can be conveniently viewed through the four list screens once the pocket pager system is configured.

1.1 Before You Start

There are certain actions which are repeated during the entry of data into the system. These actions are noted in this paragraph. To insure your programming efforts proceed smoothly, please keep the following items in mind:

- Data typed into the system is not entered in the field, unless the **RETURN** key is pressed or you move off the field using the directional arrow keys.
- Specifying another entry by pressing an alphabetic key within a field will result in the entry being overwritten. The directional arrow keys and TAB key are used for maneuvering within a field.
- In some instances, if the cursor is not positioned at the brackets, the letter entered will result in the last entry being overwritten.

2. PORT CONFIGURATION

In order for the system to communicate with the pocket pager hardware, a port must be identified on the *Main Menu*. If the port is not identified, a SERVICE indication occurs at the nurse control station, and the pocket pager system will not function.

To configure the port, refer to Figure 1 and proceed as follows:

- a. From the IDS Main Menu, press the B key. The System Programming screen appears.
- b. The cursor is positioned at the [T]ime field.

- c. Press the O key. The cursor moves to the [O]perator position.
- d. Move the cursor to the extension number indicating the port to be used (Operator A or B).
- e. Press the N key to remove the extension number and port programming.
- f. Press the P key. The cursor moves to the [P]ort field.
- g. Configure the port the Pocket Pager is connected to as follows:

CAUTION

To insure correct initialization of the port, the computer port setting must be entered in the sequence as they appear in this procedure, although they do not appear on the screen that way.

Speed	2400	
Protocol	X_ON	
Installd	Y	
Туре	031	•
Computer Port	Y	
	NOTE	

When servicing pocket page, change 'Computer Port' to N, or a SERVICE call will be generated at the NCS. When servicing is concluded, remember to change 'Computer Port' back to Y.

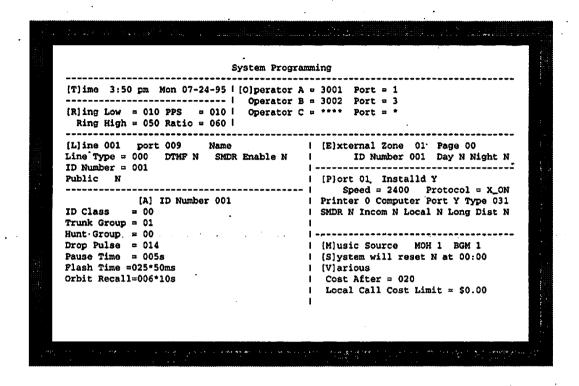


Figure 1. IDS Main Menu - System Programming

3. POCKET PAGE PROGRAMMING

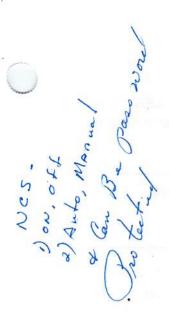
Once the hardware has been configured, the information required by the user(s) may be programmed into the system. This information is entered into the submenu selections of the *Pocket Pager Configuration Menu*. Refer to Figure 2 to view the sub-menu choices available to access.

```
Welcome to the CARE/COM IIE Nurse Call System (C) 1993
                        Executone Information Systems, Inc.
Version: C/C IIE-1.1.0b12.09/08/95
                                           System is IDLE Tue 09-10-95 4:10 pm
Select one of the following:
                                           Access Level = 08 Port = 3
A .. Pocket Pager Configuration
B .. Staff to Pocket Pager Assignments
C .. Pocket Page Monitor/Log
D .. Room to Staff Assignments
E .. Exit to CARE/COM IIE Main Menu
F .. Programmed Pager Messages
G .. Priority Pocket Page Configuration
H .. List Pagers and Pager Assignments
I .. List Staff Members
J .. List Pagers in Priority Page Groups
K .. List Station Groups -vs- Priority Page Groups
      Enter Letter or Esc >
```

Figure 2. Menu L - Pocket Page Main Menu

3.1 Accessing the Pocket Page Main Menu

- a. From the CARE/COM II-E Main Menu, press the L key. The Pocket Page Configuration Menu appears.
- Press the letter corresponding to the sub-menu selection you wish to access. The corresponding screen appears.
- c. To return to the *Pocket Page Configuration Menu* from any sub-menu selection, press the **ESC** key.
- d. To return to the CARE/COM II-E Main Menu from the Pocket Page Configuration Menu, press the E key.



Pavorty: Cools

3.2 Pocket Pager Configuration

Each device (beeper) needs to be programmed with its own identification information, such as type and pager number, as well as the information required in the system to utilize pocket page.

NOTE

Remember the guidelines established in paragraph 1.1 "Before You Start".

To program the device, refer to Figure 3 and proceed as follows:

- a. From the *Pocket Pager Configuration Menu*, press the **A** key. The *Pocket Pager Configuration* screen appears.
- b. The cursor appears in the [R]e-transmission Timeout field. Enter a value, from 1 255 (seconds). The Retransmission timeout determines the duration of time between the (last) pager receiving a code blue message, and the message being transmitted again to all necessary pagers. The system defaults at 10 seconds. Note that the values programmed in this field (Re-transmission Time, Room Coverage Timeout, and Pocket Page Password) are system-wide.
- c. In the same field, move to Room Coverage Timeout. Enter a value from 1 255 (minutes). The Room Coverage Timeout determines the duration of time between the message being transmitted to the primary, secondary, and tertiary responding groups. The system defaults at 3 minutes.
- d. In the same field, move to the *Password* entry. Enter a 6-character numeric password. This password is used at the nurse control station and allows the user to change the mode of operation. The system default for the password is 000000.
- e. Press the P key. The cursor moves to the [P]ager field.
- f. Enter a value, from 1 122, or use the I key to increment or D key to decrement to the desired value of the device number. The system default value is 1. Note that the values programmed in this field and the Room Coverage Call Filtering field are pager specific.
- g. Move to the *Pager ID*, and enter the value, from 0 99999, determined by the manufacturer to identify the pager. This number is found on the beeper.

Aftert onto

3 lundo of coverage 1) Pri. - RNI only 2) Sec - RNI, 2 only 5) Tri - RNI, 2, 3. only

Con Com limitation of 122 pages.

h. Next, determine the *Type* of paging device. Select either ALPHA (alphanumeric), NUM (numeric), TONE, or NONE (indicating no pager) by pressing the I (increment) or D (decrement) keys.

NOTE

Pagers are NOT active until the Pager ID and Type are entered.

Typing a '0' in the Pager ID field deletes the information.

- Press the C key. The cursor moves to the [C]lass entry in the Room
 Coverage Call Filtering field. This field "filters" the calls generated by a
 patient station that sends an automatic pocket page. Therefore, an RN
 configured to respond to code blue and emergency calls will not receive
 a page for a patient call.
- j. Press the I key to increment or D key to decrement to the desired class assigned to the particular device: RN, LPN, Aide, Intern, or Maint (maintenance) are acceptable entries. The system default is RN.
- k. Move to the Call Level entry. Use the increment/decrement function to move to the next call level. For each level (code blue, emergency, and routine patient call), determine if that level is "Included" Yes or No. (Staff assist, assigned as level 3, is currently not used in the system.)

5 classos

3 Levels att.

NOTE -

A code blue call determined as NOT included in call priority generates a page if the device is included in priority page group. If the code blue call IS included in call priority AND priority page group, the code blue call generates two pages.

1. Press the ESC key to return to the Pocket Page Configuration Menu.

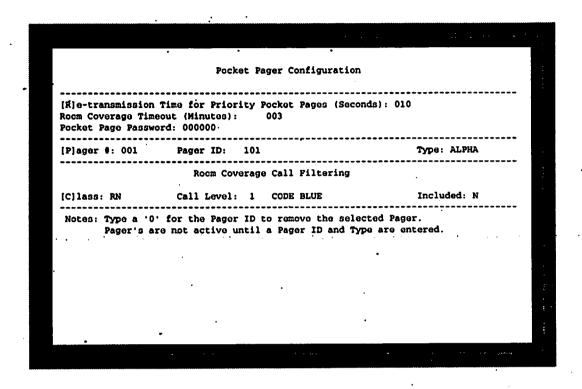


Figure 3. Pocket Pager Configuration

3.3 Staff to Pocket Pager Configuration

stass Id's

The Staff to Pocket Pager Configuration screen is used to associate a particular device with a staff member or multiple members.

NOTE

Remember the guidelines established in 1.1 Before You Start.

To program the device, refer to Figure 4 and proceed as follows:

- a. From the *Pocket Page Configuration Menu*, press the **B** key. The *Staff to Pocket Pager Configuration* screen appears.
- b. The cursor is positioned at the [S]taff # field. Enter a value, from 1 366, to identify the staff member. This number is identified at the NCS, and can equal the pager ID. You can also press the I key to increment or D key to decrement to the desired value. The default value is 1.
- c. Press the N key. The cursor moves to the [N]ame entry. Enter a 16-character, alphabetic-text string to identify the staff member associated with the device. The default text string is blank.
- d. Using the directional arrow keys, move to the [C]lass entry. Press the I key to increment or D key to decrement to the desired class: RN, LPN, Aide, Intern, or Maint (maintenance) are acceptable entries. The system default is NONE.
- e. Press the **P** key. The cursor moves to the [P]ager ID entry. Enter the value, from 0 99999, determined by the manufacturer to identify the pager. Do not enter leading zeros in the identification number unless they are in the actual pager ID.

In accordance with the pager identification number entered in step e., the device type automatically updates with the paging device type programmed in Menu A - Pocket Pager Configuration. Therefore, if the device ID was programmed as 015 and Alpha type in Pocket Pager Configuration, then entering 015 in step e. automatically reflects the type as Alpha on the Pocket Page Configuration menu.

- Repeat steps b. e. to assign multiple staff members to one paging device.
- g. Press the ESC key to return to the *Pocket-Page Configuration Menu*.

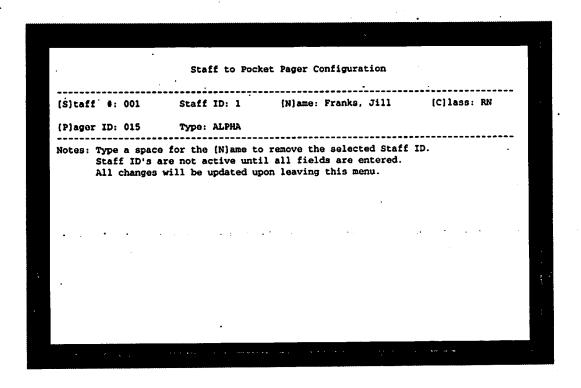


Figure 4. Staff to Pocket Pager Configuration

3.4 Pocket Page Monitor/Log

The Pocket Page Monitor/Log is used to view a list of pocket pager activity determined by the transmission of the event. The dynamic screen displays new messages as they are transmitted, with the most current message appearing highlighted. The list is circular; 22 entries can display at a time.

To view the list, reference Figure 5 and proceed as follows:

- a. Press the C key. The Pocket Page Monitor/Log screen appears.
- b. Although the screen is a log of events, there are two actions which can be accomplished.
 - Press the C key to clear the entire page.
 - Press the CTRL + W keys at the same time to refresh the screen.
- c. Press the ESC key to return to the Pocket Page Configuration Menu.

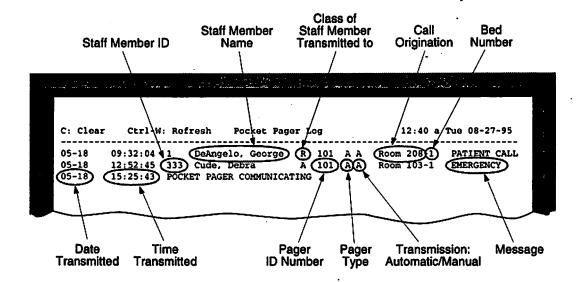


Figure 5. Pocket Page Monitor/Log

In addition to call activity, a variety of pocket pager log messages can be viewed. The system pocket page information can be any of the following (note that ppppppp = pager ID, nnnnnn = number, and ssssss = string):

Pager Link Status

POCKET PAGER COMMUNICATING :Link protocol to pager successfully negotiated. POCKET PAGER COMMUNICATION FAILURE :Pager did not respond to polling.

Page Mode Changes

From NCS nn (ssssssssssssss): PAGER OFF :NCS changed pager configuration to OFF From NCS nn (sssssssssssssss): PAGER ON AUTO MODE :NCS changed pager configuration to AUTOMATIC From NCS nn (ssssssssssssss): PAGER ON MANUAL MODE :NCS changed pager configuration to MANUAL

Paging Attempts

Manual Pages <StaffID><Staff Name><Class><Pager ID><Pager Type> M <Pager Message> **Automatic Pages** <StaffID><Staff Name><Class><Pager ID><Pager Type> A <Pager Message> Priority Pocket Pages <Pager ID><Pager Type> P <Pager Message>

Responses to Paging Attempts

PPG OK: MESSAGE SENT TO PAGER ppppp TOTAL SENT: nnnnn :Message to Pager Transmitter was acknowledged - message sent! PPG ERR: MESSAGE NAK ppppp TOTAL NAKS: nnnnn :Message to Pager Transmitter was rejected due to a checksum or other error. CARE/COM II-E will attempt 3 times before giving up. PPG ERR: 'ID=' RESPONSE TO ppppp TOTAL INVA: nnnnn PPG ERR: EOT RESPONSE TO ppppp TOTAL EOT: nnnnn :Pager Transmitter responded with 'ID=' or EOT to a page request. CARE/COM II-E will try to send the page message again after a logon procedure is complete. This appears to be a flaw in the pager and occurs occasionally for no apparent reason.

PPG ERR: [Pager Specific Error Text]

:Some other error received from pager hardware - see pager documentation. These errors occur if, for example, an alphanumeric pager is attempted on a numeric only pager. The configuration for the pager in the Motorola People Finder does not match the configuration in CARE/ COM II-E.

PPG ERR: MESSAGE TO ppppp NOT SENT! TOTAL REJ: nnnnn :Message to Pager Transmitter was rejected a third time, CARE/COM II-E will not attempt to send it again.

Other Errors

MANUAL PAGE FOR ROOM nnnnn NOT GENERATED: PAGER NOT INSTALLED

MANUAL PAGE TO STAFF nnn NOT GENERATED: PAGER NOT INSTALLED

AUTO PAGE FOR ROOM nnnnn NOT GENERATED: PAGER NOT INSTALLED

PRIORITY PAGE FOR ROOM nnnnn NOT GENERATED: PAGER NOT INSTALLED

: Page was due although pager was not installed.

MANUAL PAGE FOR ROOM nnnnn NOT GENERATED: PAGER HAS FAILED

MANUAL PAGE TO STAFF nnn NOT GENERATED: PAGER HAS FAILED

AUTO PAGE FOR ROOM nnnnn NOT GENERATED: PAGER HAS FAILED

PRIORITY PAGE FOR ROOM nnnnn NOT GENERATED: PAGER HAS FAILED

:Page was due although pager was failing.

PPG ERR: WATCHDOG TIMEOUT! TOTAL WDTO: nnnnn
:No characters have been received from the pager transmitter for 60
seconds, the communication link will be reset, a new watchdog timeout
started, and a new link will be attempted.

PPG ERR: ID pppppp TOO LONG, NOT SENT! TOTAL IDRE: nnnnn: The PET protocol only supports 3 digit pager IDs, although the Pager ID configured in Menu A allows 5 digit IDs.

PPG ERR: QUEUE IS FULL! TOTAL QUOV: nnnnn

:50 messages are queued for the pager, any more will be dumped.

PPG OK: PAGER UN-INSTALLED

:The watchdog timer has timed-out but the pocket pager has been uninstalled in the IDS Menu B screen. No more attempts to connect with the pager will be made until it is re-installed.

3.5 Pocket Pager Room to Staff Assignments

pers assigned to each room and bed as well as the response priority the staff nember is given for that unit.	
Remember the guidelines established in 1.1 Before You Start.	_
•	

To program the room information, refer to Figure 6 and proceed as follows:

- a. From the Pocket Page Configuration Menu, press the D key. The Pocket Pager Room to Staff Assignments screen appears.
- b. The cursor is positioned at the [R]oom field. Enter the value, from 0 99999, to identify the room number. The system default is the first valid room number found.
- c. Press the **B** key. The cursor moves to the [B]ed entry within the same field. Enter the value, from 0 49, to identify the bed number, particularly in a ward setup. The system default is 0.

Once the room and bed information has been entered, the station group

field will automatically update in accordance with the station groups configured in *Patient Station Programming*.

- d. Press the S key. The cursor moves to the [S]taff 1D entry.
- e. Enter a staff identification number, from 1 366, determined in *Staff to Pocket Pager Configuration*.

The Name, Class, and Pager ID information appears.

- f. Press the P key. The cursor moves to the [P]age Sequence entry.
- g. Enter a value from 1 3 to determine the response level for the staff member to the specified station group. A value of '1' assigns the staff member primary response to that station group, '2' assigns secondary response, and '3' assigns tertiary response to the specified station group. A value of '0' deletes the staff entry from the list.
- h. To copy the staff assignment to all the rooms in the station group, use the convenient X copy function at the [R]oom field.

i. Press the ESC key to return to the Pocket Page Configuration Menu.

R]oom:	90100	[B]ed:	00-00 Station	Group: 01	STATION	GROUP 01
Num	[S]taff I	D Pager I	D Name	Class	[P]age Seq	Level
1	1	101	Wilson, Jane	RN	1	2345
2	2	102	Redman, Allan	LPN	2	2345
3	3		Anderson, Kate		3	12345
4	4	104	Adams, Brian	INTRN	1	12345
5	5	105	Sohumacker, John	RN	2	2345
6	6	106	Debont, Dan	LPN	3	2345
7	7	107	Cameron, Jeff	LPN	1	2345
8	8		Huston, Jackie			12345
			Staff ID or Page Sequager ID Indicates a R			nment.

Figure 6. Room to Staff Assignments

3.6 Programmed Pager Messages

The most commonly used information can be programmed as a message, appearing as a text string. Up to 192 of these pre-programmed messages can be accessed by the user at the nurse control station.

Remember the guidelines established in paragraph 1.1 "Before You Start".

To program the messages requested by the facility, refer to Figure 7 and proceed as follows:

- a. From the *Pocket Page Configuration Menu*, press the F key. The *Programmed Pager Messages* screen appears.
- b. The cursor is positioned at the beginning entry of the first message.
- c. Type in up to 16 characters. The default first message is "CALL".



- d. Press the ENTER key to move the cursor to the next message field.
 - To access a specific page of messages, press the @ key to move the cursor to the *Page* field. Type in the desired page number to go to.
 - You can also press the I or D keys to increment or decrement through the pages of messages.
- e. Press the ESC key to return to the Pocket Page Configuration Menu.

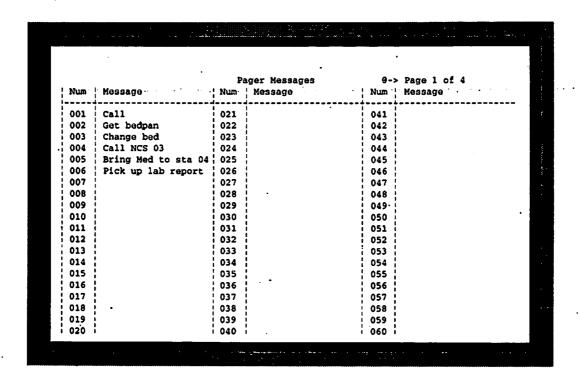


Figure 7. Programmed Pager Messages

3.7 Priority Pocket Page Configuration

-	rity group of staff members can be identified to receive level 1 calls. These ers are responsible for specific station groups configured as priority page.
Reme Start".	mber the guidelines established in paragraph 1.1 "Before You
	gram the priority pocket page group information, refer to Figure 8 and d as follows:
a.	From the Pocket Page Configuration Menu, press the G key. The Priority Pocket Page Configuration screen appears.
b.	The cursor is positioned at the [P]riority Page Group. Enter the value, from 1 - 10, to identify the group number. The system default is 1.
c.	Move to the <i>Pager</i> entry. Enter the pager identification number determined in <i>Pocket Pager Configuration</i> .
d.	Move to the <i>Included</i> entry, press the Y key to enable the pager to respond to the priority pocket page group.
e.	Press the S key. The cursor is positioned at the [S]tation Group field. Enter a value, from 1 - 96, to identify a station group.
f.	Move to the <i>Priority Pocket Page Groups</i> entry. Identify the priority page group, 1 - 10, which the station group will belong to.
g.	Move to the <i>Included</i> entry, press the Y key to enable the priority page group as a member of the station group.
h.	There are 3 convenient copy functions provided:
í	Press the X key to Copy This Priority Groups Configuration to all (ten) Priority Groups
ſ	Press the Y key to Copy This Pagers Configuration (Pager ID) to all Priority Groups (10)
ļ	Press the Z key to Copy This Station Groups Priority Page Configura- tion to all Station Groups (96)

i. Press the ESC key to return to the Pocket Page Configuration Menu.

		·	·	
	Priority Poc	ket Page		
(P)riority Page Group: 01 Pager ID: 101	Included	: Y		
[S]tation Group: 01 Priority Page Group: 01	Included	: Y		
Copy Functions:				
[X] Copy this Priority Group [Y] Copy this Pager Configu: [Z] Copy this Station Group	ration to all	Priority Group	s	on Groups
			•	
				4
			•	1

Figure 8. Priority Pocket Page Configuration

4. LIST PAGERS AND PAGER ASSIGNMENTS

The List Pagers and Pager Assignments screen identifies the staff member information associated with a specific pager.

To access the List Pagers and Pager Assignments screen, proceed as follows:

- a. Press the H key. The List Pagers and Pager Assignments screen appears.
- b. Press the I key to present the next page or the D key to present the previous page of information if the screen contains a multi-page display.
- c. Press the ESC key to exit the List Pagers and Pager Assignments screen.

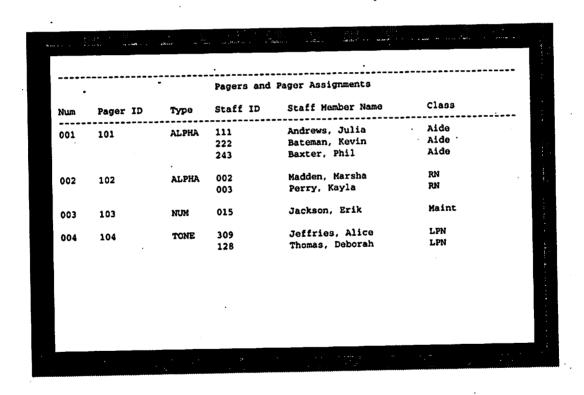


Figure 9. List Pagers and Pager Assignments

5. LIST STAFF MEMBERS

The List Staff Members screen lists members alphabetically with pager assignments.

To access the List Staff Members screen, proceed as follows:

- a. Press the I key. The List Staff Members screen appears.
- b. Press the I key to present the next page or the D key to present the previous page of information if the screen contains a multi-page display.
- c. Press the ESC key to exit the List Staff Members screen.

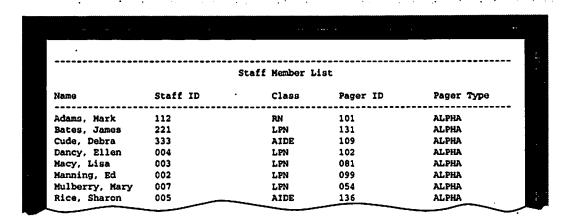


Figure 10. List Staff Member

6. LIST PAGERS IN PRIORITY POCKET PAGE GROUPS

The List Pagers in Priority Pocket Page Groups screen lists the ten priority groups and the pager assigned to that group.

To access the List Pagers in Priority Pocket Page Groups screen, proceed as follows:

- a. Press the J key. The List Pagers in Priority Pocket Page Groups screen appears.
- b. Press the I key to present the next page or the D key to present the previous page of information if the screen contains a multi-page display.
- c. Press the ESC key to exit the List Pagers in Priority Pocket Page Groups screen.

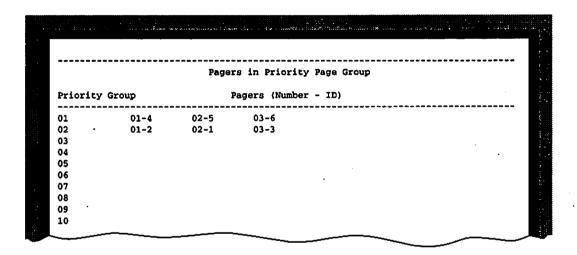


Figure 11. List Pagers in Priority Pocket Page Groups

7. PRIORITY POCKET PAGE GROUPS IN STATION GROUPS

The Priority Pocket Page Groups in Station Groups screen identifies the station group and the priority pocket page group which it is programmed to.

To access the Priority Pocket Page Groups in Station Groups screen, proceed as follows:

- a. Press the K key. The Priority Pocket Page Groups in Station Groups screen appears.
- b. Press the I key to present the next page or the D key to present the previous page of information if the screen contains a multi-page display.
- c. Press the ESC key to exit the *Priority Pocket Page Groups in Station Groups* screen.

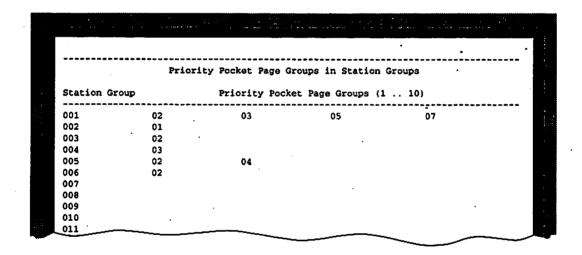


Figure 12. Priority Pocket Page Groups in Station Groups

8. NCS AND DSS PROGRAMMABLE KEYS

To access the pocket page function at the nurse control station, it is necessary to program at least one of the programmable keys at the NCS, or at least one of the 48 keys of the optional DSS console. Refer to Table 1 for the key code and sub-key codes used for the pocket page features.

8.1 Programming the NCS Keys

To access the Nurse Control Station Programming screen from the CARE/COM II-E Nurse Call System Main Menu, proceed as follows:

- a. Press the G key. The Nurse Control Station Programming screen appears. The cursor is positioned at the N[C]S Number field.
- b. Press the K key. The cursor moves to the [K]eys field.
- c. Type in the key code, or use the directional arrow keys to scroll through the available code choices.
- d. Press the S key to modify the sub-key code for a given key. The cursor moves to the sub-key area.
- e. Type in a key code or use the directional arrow keys to scroll through the available code choices.
- f. Repeat steps b. e. if more than one key is being programmed.
- g. Press the ESC key to exit the Nurse Control Station Programming screen.

8.2 Programming the DSS Keys

To access the Direct Station Selection Programming screen from the CARE/ COM II-E Nurse Call System Main Menu, proceed as follows:

- a. Press the H key. The Direct Station Selection Programming screen appears. The cursor is positioned at the DSS [N]umber field.
- b. Press the K key. The cursor moves to the code of the first programmable key in the [K]eys field.
- c. Type in a key code, or use the directional arrow keys to scroll through the available code choices.

- d. Press the S key to modify the sub-key code for a given key. The cursor moves to the sub-key area.
- e. Type in a key code or use the directional arrow keys to scroll through the available code choices.
- f. Repeat steps b. e. if more than one key is being programmed.
- g. Press the ESC key to exit the *Direct Station Selection Programming* screen.

Table 1. NCS/DSS Key Codes for Pocket Page

Key Code	Sub-Key Code	Operation
580 580	0 • Staff ID (1 - 366)	Pocket page menu Page a specific staff member
580	99999	Repeat the last page





Part Number TF1872 July 17, 1996

CARE/COM® II-E
Nurse Call System

= Route To: District Manager Distributor Principal Sales Operations Technicians

Milford, CT 06460

Revised Programming Instructions for Integration Note 1

This *Product Update* provides expanded information to configure the Motorola People Finder, as was previously documented in Integration Note 1, dated February 19, 1996.

Guide to this Product Update

This *Product Update* provides all the necessary programming instructions. Make sure you file this *Product Update* in the CARE/COM II-E Technical Manual.

<u>Use of This Information</u>

This material contained in this *Product Update* is confidential and proprietary to EXECUTONE Information Systems, Inc., and is provided for the sole use of its employees, authorized individuals, and customers. This material shall not be disclosed in whole or in part without the prior written consent of EXECUTONE Information Systems, Inc. The information contained in this *Product Update* is subject to change without notice as progress in engineering or manufacturing methods may warrant.

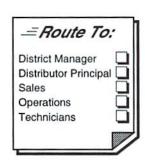
File In:

Master Technical Facts File

CARE/COM® II-E Technical Manual Issue A



Technical Literature 478 Wheelers Farms Road Milford, CT 06460









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Number 1 issue B July 17, 1996

CARE/COM® II-E release 1.1

Pocket Page Interface

The Pocket Page interface enables the CARE/COM® II-E Nurse Call System to be integrated with the Motorola People Finder On-Site Communication System in order to provide more versatile and expanded call coverage.

Guide to This Integration Note

This Integration Note supersedes Integration Note 1 by providing expanded programming information. Make sure you file this Integration Note in place of Integration Note 1, dated Februaury 19, 1996, in your *CARE/COM II-E Technical Manual*. In addition, be sure to refer to it for information on integrating the CARE/COM II-E system with Pocket Page.

Use of This Information

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1. INTRODUCTION

Pocket paging allows for versatile and expanded call coverage. With pocket page integration, the facility staff can wear pagers (beepers) to inform them of calls placed in the CARE/COM II-E system.

CARE/COM II-E provides two modes of pocket page operation:

- ☐ In "Automatic Mode," all staff members assigned as primary careproviders for a room will be paged when a call is placed from that room.
- ☐ In "Manual Mode," attendants at the nurse control station may manually generate a page to a staff member assigned to cover a room, or any staff member.

Refer to Section 250 of the CARE/COM II-E Technical Manual for specific information on pocket page operation in the CARE/COM II-E Nurse Call System.

DESIGN AND CONFIGURATION

In order to integrate the Pocket Page interface with the CARE/COM II-E system, you will need the following:

Equipment	Part Number
Main Control Unit Software EPROM U41/1 Low and U42/1 High	36107-1, Revision 1.1 or higher
Nurse Control Station Software EPROM U22	36427, Revision 1.6 or higher
I/O Expansion Module (if second RS-232 port is required)	23130
Pocket Page Software Activation	109000
Shielded Cable	01079-1
Equipment	Motorola Part Number
Motorola People Finder On-Site Communication System (or other 100% compatible system)	E24PFE0001AN or E34PFE0001AN
Motorola Alphanumeric Interface Instruction Manual	68P81101B25-0
Motorola People Finder Operating	68P81000B15-A

Instructions

3. INSTALLATION

The frequency at which the Pocket Page unit transmits must be licensed by the FCC.				
The installation of the Motorola People Finder simply requires connecting the unit to the auxiliary panel. However, the cable supplied with the People Finder Unit will not function properly with the CARE/COM II-E system. A shielded cable, p/n 01079-1 is required.				
To connect the People Finder system to the central equipment, reference Figure 1 and proceed as follows:				

a. Using the shielded cable p/n 01079-1, connect the DB25M male connector to either port 1 or port 2 (RS-232) on the auxiliary panel. Make sure the

DB25M connector without the jumper (pins 1, 2, 3, 7, and 8) is connected to

NOTE -

If a programming terminal is installed, there will be only one RS-232 port available for connecting the People Finder system.

the CARE/COM II-E system.

b. Connect the other end of the RS-232 cable to the back of the People Finder unit at the connector marked 'EIA RS-232C'. This DB25M connector contains pins 1, 2, 3, 7, 8, and 20.

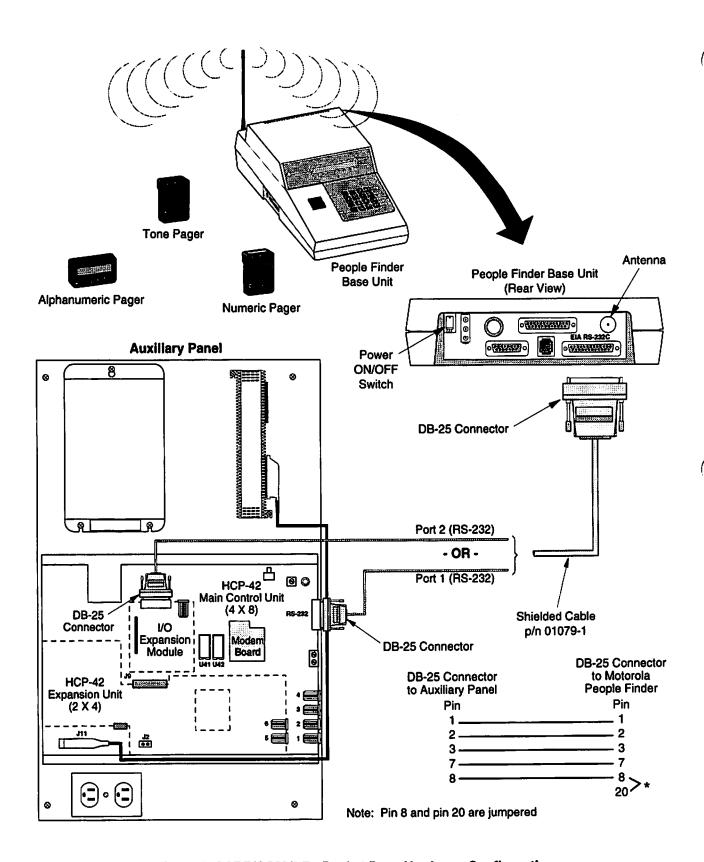


Figure 1. CARE/COM II-E - Pocket Page Hardware Configuration

4. PROGRAMMING

Version 1.1 software is furnished with the pocket page feature resident. However, the feature must be activated remotely in order for the feature to operate at a site.

4.1 Configure a Port for Pocket Page

Once the turn-on feature has been initiated, a port must be identified on the *Main Menu* in order for the system to communicate with the pocket pager hardware. If the port is not identified, a SERVICE indication will occur at the nurse control station, and the pocket pager system will not function. To configure the port, refer to Figure 2 and proceed as follows:

- a. From the *Main Menu*, press the **B** key. The *System Programming* screen appears.
- b. The cursor is positioned at the [T]ime field.
- c. Press the O key. The cursor moves to the [O]perator position.
- Move the cursor to the extension number indicating the port to be used (Operator A or B).
- e. Press the N key to remove the extension number and port programming.
- f. Press the P key. The cursor will move to the [P]ort field.
- g. Configure the port the Pocket Pager is connected to as follows:

NOTE -	
NOIL	

To insure correct initialization of the port, the computer port settings must be entered in the sequence as they appear in this procedure, although they do not appear on the screen that way.

Speed	2400
Protocol	X_ON
Installd	Y
Type	031
Computer Port	Y

- NOTE -

When servicing pocket page, change 'Computer Port' to N, or a SERVICE call will be generated at the NCS. When servicing is concluded, remember to change 'Computer Port' back to Y.

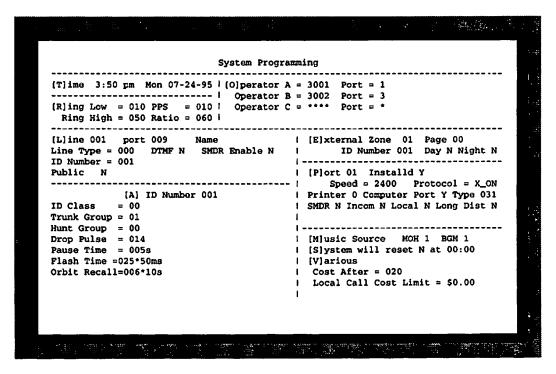


Figure 2. IDS Main Menu - System Programming

4.2 Setting Up People Finder

CARE/COM II-E is designed to work with the Motorola People Finder On-Site Communication System with the alpha-numeric interface option. Make sure this option is installed. The Motorola Alphanumeric Interface *Instruction Manual* (Motorola part number 68P81101B25-0) provides a detailed description of this option.

Note that the instruction manual for the Motorola Alphanumeric Interface provides detailed information on programming People Finder. This paragraph is only meant to serve as a guide to get your unit up and running. It does not replace the need to maintain a set of Motorola documentation.

To configure the People Finder system, reference Table 1 and identify the system parameters as follows:

NOTE ---

Press the '-' key at any time to exit the current configuration and return to the *System Configuration* menu.

When programming the parameters upon initialization, the parameters appear in the sequence documented. To change the parameters at any time after initialization, it is necessary to use the **F1** and **F2** keys to scroll forward or backward through the RS-232-C parameters, until the correct choice is displayed.

- a. Press and hold the 1 key while powering up the People Finder unit.
- b. When the PASSWORD= prompt appears, press 1, 9, and then ENTER. The System Configuration menu appears.
- c. From the System Configuration menu, press the 7 key. The RS-232-C Configuration menu appears.

The Communication Mode must be defined. This parameter sets up the communication protocol that will be used. To communicate, the communication mode must be set to PET.

- d. If necessary, press the F1 (forward) or the F2 (backward) key to scroll through the RS-232-C parameters until the COMM MODE= prompt appears.
- e. Press any number key to advance to the next selection.
- f. When the PET prompt appears, press F1 to accept the entry.

The Baud Rate is next to be defined. The baud rate is the speed in bits per second that the RS-232-C port operates at.

- g. If necessary, press the F1 (forward) or the F2 (backward) key to scroll through the RS-232-C parameters until the BAUD RATE= prompt appears.
- h. Press any number key to advance to the next baud rate setting. The correct baud rate for the system is 2400.
- i. When the correct baud rate appears, press F1 to accept the entry.

The parameter 7-Bit, Even configures the RS-232 port to operate either with or without parity. When this parameter is set to "Y", the word format consists of a 7-bit word with 1 stop bit and even parity. When this parameter is set to "N", the word format consists of an 8-bit word with 1 stop bit and no parity.

- j. If necessary, press the F1 (forward) or the F2 (backward) key to scroll through the RS-232-C parameters until the 7-BIT, EVEN? prompt appears.
- k. Press any number key to toggle between Y and N.
- 1. When the paramter appears as "N", press F1 to accept the entry.

The *Dedicated* parameter configures the RS-232-C port for either permanent (dedicated) access or timed access. Permanent access allows a user unlimited access to a port without a time-out condition occurring. Timed access requires the user to enter pages in a predetermined amount of time. The *Dedicated* parameter should be set to N. Therefore, a timed access must be determined in steps p - s.

m. If necessary, press the F1 (forward) or the F2 (backward) key to scroll through the parameters until the DEDICATED? prompt appears.

- n. Press any number key to toggle between Y and N.
- o. When N appears as the selected access mode, press F1 to accept the entry.

Access time is the total amount of time (in minutes) that the user has access to the system. Since the dedicated parameter was NOT set to "Y" in steps m - o, then an access time must be determined.

- p. If necessary, press the **F1** (forward) or the **F2** (backward) key to scroll through the parameters until the ACCESS TIME= prompt appears.
- q. Press the DEL key to erase any existing numbers on the display.
- r. Enter the number "10" to specify the access time in minutes.
- s. When the desired access time is entered, press F1 to accept the entry.

Inactive time is the total amount of time, in seconds, between key strokes a user has before a timeout condition will occur. Since the dedicated parameter was NOT set to "Y", then the inactivity time must be configured.

- t. If necessary, press the F1 (forward) or the F2 (backward) key to scroll through the parameters until the INACTIV TIME= prompt appears.
- u. Press the DEL key to erase any existing numbers on the display.
- v. Enter the number "20" to specify the inactivity time in seconds.
- w. When the desired inactivity time is entered, press F1 to accept the entry.
- x. If necessary, press the F1 (forward) or the F2 (backward) key to scroll through the parameters until the ID NUMBER= prompt appears.
- y. Press the **DEL** key to erase any existing numbers on the display.
- z. Enter the number "1" as the ID.
- aa. When completed, press the '-' key twice to return to the PAGE mode.

In addition to setting the communications parameters, the pagers may need to be programmed into the People Finder system. (Only pagers that have been programmed into the People Finder system will be called.)

Note that the operating instructions for the Motorola People Finder (Motorola part number 68P81000B15-A) provide specific information concerning programming pagers.

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If the Peope Finder was packaged with pagers, they had been programmed into the system and are ready to communicate with the system. However, if the site already has pagers, or if additional pagers are being added, each pager must be programmed into the People Finder system.

To program pagers into the People Finder system, proceed as follows:

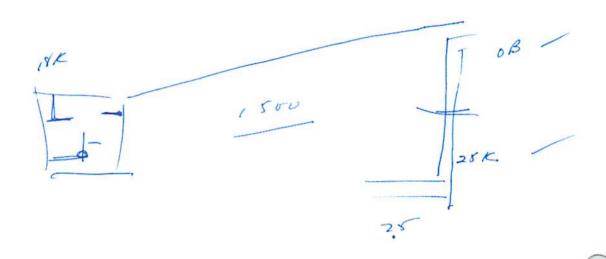
- a. While in the PAGE mode, press the '-' key and type '7531' at the "Password" prompt to access the PROGRAM mode.
- b. Press '1' for Pager Assignment to add, remove, or change pagers configured in the system.
- c. Press the '-' key to exit *Pager Assignment* and return the People Finder unit to PAGE mode.

Table 1. System Settings

	Communication Mode	•	7-Bit, Even?		Access Time		ID Number=
CARE/COM II-E	PET Protocol	2400	N	N	10	20	1

4.3 Pocket Page Programming

Once the pocket paging hardware has been installed, initial system setup is required via a programming terminal, prior to the system functioning. The information the system requires, such as staff coverage, pager assignments, etc., is programmed under password protection by a certified technician. Refer to Section 550 - *Pocket Page Programming*, for all the information necessary for the pocket page system to function on CARE/COM II-E.



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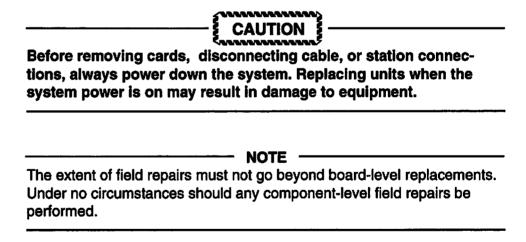
Section 600 - Maintenance

1. GENERAL

This section provides the testing procedures that must be performed throughout the various stages of installation. <u>Table 1 in Section 400</u> details the installation sequence and references this section in regard to system testing.

Information on the proper maintenance and care of the CARE/COM II-E Nurse Call System is also provided in this section. Beyond the specific requirements pointed out in paragraph 2, the CARE/COM II-E system does not require special attention other than to make sure the equipment is in good repair, the wiring is dressed neatly and away from potential hazards, and all equipment is kept in a basic state of cleanliness.

When servicing a system, always remember to document the details on the database data sheets service log found in <u>Appendix A</u>. By providing the maintenance history of the system, the service log can show patterns of repetitive service calls developing within the system.



1.1 Accessing System Setup

To access the CARE/COM II-E system programming on-site, an acceptable programming terminal connected to one of the input/output ports on the Main Control Unit is required. You also need to know the correct password. The system is equipped with a built-in 300/1200 baud modem as well, which permits the technician to access the system from a remote location to carry out any programming or maintenance. Again, the correct password is required.

1.2 CARE/COM II-E Software Versions

As the CARE/COM II-E system evolves, its features and compatibility will change. Whenever a new software version is released, its features and compatibility will be compared to the previous system software versions. Make sure you use the Maintenance section to keep track of the most recent software installed in the system.

Nurse Control Station	Direct Station Selection (DSS) Console	ASI Card	Flasher Card	Main Control/Expansion Unit
p/n 36427	p/n 36507	p/n 36327-1	p/n 36347	p/n 36107-1
checksum 2BA6	checksum 2630	checksum 2EAF	checksum 7BF5	checksum 1L - 8455 1H - 7963
Rev 1.5	Rev 1.0	Rev 1.0	Rev 2.0	Rev 0.1.0.17

2. PREVENTIVE MAINTENANCE

Each CARE/COM II-E Nurse Call System should be maintained and tested according to the defined maintenance procedures:

- a. Test the operation of all stations.
- b. Test the operation of all switches (code blue, emergency).
- c. Verify operation of all lamps.
- d. Verify correct operation of all features accessed via nurse control station(s).
- e. Verify battery backup is operating.

Additionally, make sure that all equipment locations are of an acceptable level o cleanliness and ventilation.
Any problems that a customer experiences need to be routed through their authorized EXECUTONE service representative.

3. ADDITIONAL SUPPORT INFORMATION

CARE/COM II-E test equipment, documentation, training, technical support, spare parts, and the repair/return procedure are described below.

3.1 Test Equipment

A digital multimeter is usually the only piece of test equipment necessary to perform most system diagnostics and troubleshooting. Voltage measurements at the end of the cable group are used to verify the +12 volt, +24 volt, fail-safe bus level, and the code blue bus level.

Resistance readings with the power off are useful in checking for shorts and ground faults.

Voltage readings between the system ground and power supply voltages to building ground are useful in identifying ground faults or leakages to building ground.

If poor AC power is suspected, a power line monitor that records fluctuations and transients is useful to determine the condition of AC power. The power supply module is designed to handle moderate power fluctuations. However, extreme AC power fluctuations must be corrected.

3.2 Documentation Available

The following user documentation is available to support release 1.0 (items indicated with a "*") are available only through technical training:

Part #	Issue (Date)	<u>Title</u>
3803401	A April 1995	CARE/COM® II-E User Guide
3803411	A April 1995	CARE/COM® II-E Quick Reference Guide
*	A April 1995	CARE/COM® II-E Programming Guide

These guides are professional in appearance and make a positive impression when they are left at a hospital. The content is created with the end-user foremost in mind. All features that the healthcare personnel use are presented in brief steps that are easy to understand.

The following technical documentation is available to support CARE/COM II-E release 1.0:

Part #	Issue (Date)	<u>Title</u>
*3803101	A June 1995	CARE/COM® II-E Technical Manual

The CARE/COM II-E Technical Manual provides a technical description of the system and step-by-step procedures for its operation, installation, programming and maintenance. The procedures and methods in this manual have been prepared to assist the EXECUTONE CARE/COM II-E certified technician in planning and installing the system.

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Note that the manual consists of several sections organized so the information is easy to find. The quickest way to become familiar with the manual is to use the Table of Contents in the front of this manual and at the beginning of each section. These pages show, in outline form, the organization of the manual and the topics discussed in each section.

This manual uses some conventions the reader should understand. While reviewing the steps for a particular action, the reader should always pay close attention to any WARNINGS, CAUTIONS, and NOTEs. These items bring to the reader's attention a condition that could arise while installing, programming, or servicing the system. WARNINGS point out hazards the reader needs to know to prevent injury or other bodily harm. CAUTIONS contain information that prevents damage to the system's equipment or data. NOTEs emphasize certain information.

The CARE/COM II-E Technical Manual is available in kit form. Each kit contains a binder and the manual (as shrink-wrapped pages). In the future, Product Updates will be included as well, particularly those that have been issued that relate to the manual as of the shipment date.

The CARE/COM II-E Technical Manual kit contains:

	one CARE/COM II-E Technical Manual (shrink-wrapped)
	one 2-inch EXECUTONE Healthcare charcoal binder
0	various Product Updates

Product Updates are issued to update the information in the CARE/COM II-E Technical Manual. These updates contain either new information (such as software releases) or revisions to the manual. The first page of each Product Update describes which Technical Manual the Product Update is for and the suggested distribution. All Product Updates must be listed on the Records page in the Updates section of the manual.

One copy of each Product Update is sent free of charge to each office. The office can then make as many copies as it needs, or it can order the quantity needed to update its manuals. Please distribute all CARE/COM II-E Product Updates to all of your CARE/COM II-E certified technicians.

Product Updates that are available for ordering can be ordered throught the Inside Sales/Customer Service Department, using the number of the Product Update as the part number.

3.3 Technical Training

Technical training for the CARE/COM II-E product is available as an individual course. It is delivered in a classroom setting at EXECUTONE Information System's corporate headquarters in Milford, Connecticut.

Audience

The audience is installation and service repair technicians who need to know the basic operation, configuration, installation, programming, and maintenance of the Nurse Call System, and much more.

Prerequisite Knowledge Required

None

Course Purpose

To provide the required knowledge to properly configure, install, program, and maintain new and retrofit CARE/COM II-E systems.

Learning Objectives

At the completion of the course, in conjunction with all available documentation, the student will be able to:

Describe the system features and capacities
Configure hardware requirements based on features requested
Properly install a CARE/COM II-E system in a new site
Properly retrofit a CARE/COM II-E system at a Care/Com I or II site
Perform all system programming
Perform all nurse control station operations
Isolate and troubleshoot equipment and/or programming problems

Support Materials

The CARE/COM II-E Technical Manual will be provided along with programming terminals for hands-on exercises. An installation and fault isolation lab, in parallel with overhead transparencies, will provide the technician with a well-rounded learning experience.

Criteria for Certification

The student must complete all lab requirements and pass the Lab Quiz and Final Test with a grade of 80% or above. Anyone missing more than two hours of class time will not be certified.

Course Length

3 days. Contact the Technical Training department for class schedules.

Tuition

The current tuition for this course is \$420.00 per person.

3.4 Technical Support

If a technician on-site requires technical assistance, contact the EXECUTONE Field Support Group. The Field Support Group is available for technical assistance from 8:00 AM to 8:00 PM EST. They can be reached at 1-800-759-3932.

All after-hours support calls will be answered by the National Service Center, and a representative will contact the Field Support Engineer (FSE) on call for major system-affecting problems such as down systems. There is also a supervisor on call for additional assistance or escalation purposes.

The Field Support Engineers have received additional training and are experienced in troubleshooting difficult problems involving software, hardware, and power.

In order to ensure that technical support is available to those *qualified* technicians who need it, each technician must follow these guidelines when calling in:

- a. Have your employee social security number and customer ID ready. The Field Support Group will not provide support without a valid ID number. Field Support is only authorized to work with technicians who have been trained and qualified on the CARE/COM II-E system. Field Support is not a substitute for training, but an escalation point for problems.
- b. Determine the exact configuration (model numbers, software, etc.) for the system being worked on.

General Technical Questions

On many occasions, Field Support is called with general information questions that could be answered using technical documentation or the training class material. In order to handle calls of a critical nature, time cannot be spent training over the telephone, or designing an application or setup.

3.5 Recommended Spares

An adequate supply of spares should be available at the local office to take care of device failure. If site distance and travel time is a consideration, arrange to store spares at the facility. See Table 1 for the recommended quantity of spares for each piece of equipment. For larger systems, vary the quantity accordingly.

Table 1. Recommended Spares for the CARE/COM II-E System

Part Number	Description	1 - 10	Installed Base Systems 10 - 20	20 - 30
Ce	entral Equipment	- Equipment P	anel Components:	
36318-1	Ribbon Cable	1	2	2
49-07-00001	M66 Block	1	1	1
CCPSM/BBS	Power Supply Module	1	2	3
HPNBATT	Battery Backup	1	1	1
36320-1	ASI Card	2	3	4
36340-1	Flasher Card	1	2	3
C	Central Equipment	- Auxiliary Pa	anel Components:	***
36100-1	Main Control Unit (board)	1	1	2
23120	(2x4) Expansion Unit (card)			
36200-1	(4x8) Expansion Unit (board)	As Required		
23220	(4 x 8) Expansion Unit (card)			
25222	Power Supply	1	2	3
36290-1	Module			

Table 1. Recommended Spares for the CARE/COM II-E System (Continued)

Part Number	Description	1 - 10	Installed Base Systems 10 - 20	20 - 30
	Nurse Con	trol Station - C	Components:	
36400-1	Nurse Control Station	1	2	3
3647O-1	NCS Receptacle	1	2	3
36476-1	NCS Cable	1	1	1
364 5 O-1	NCS Push-to-Talk Handset	1	2	3
36500-1	Direct Station Selection Console	1	1	1
		Station Units:	<u> </u>	
CCP1S/W43	Single Patient Station	2	4	6
CCP2S/W43	Dual Patient Station	2	4	6
CCDSS/W43	Duty/Staff Station	1	2	3
3692O-I	Code Blue Station	4	8	8
36900-2	Emergency Station	4	8	8
CCPCS/W43	Single Patient Sideguard Station	2	4	6
3080215	Dual Patient Sideguard Station	2	4	6
15-O6-500003 15-O6-510003	3-Pin Edge Connector, Strain Relief	10	20	30
AA38O89	9-Pin Edge Connector	1	2	3
30-23-00001	Station Unit Lamp	10	20	30

Table 1. Recommended Spares for the CARE/COM II-E System (Continued)

Part Number	Description	1 - 10	Installed Base Systems 10 - 20	20 - 30
	Cali	Origination De	evices:	
PCU-3	3-Button Patient Control Unit	3	6	9
M282	Call Button			
M18A	8' Call Cord			
M88	Geriatric Call Cord		As Required	
M518X	Call Cord for Oxygen Environment	·		·
	Entertainment	and Environm	ental Interfaces:	
33920-1	Single TV/Light Interface			
33920-2	Dual TV/Light Interface			
31780-2	Single Entertaiment Interface	As Required		
31770-2	Dual Entertainment Interface	•		
	Auxili	ary Signaling	Devices:	
EX-ZCM3	Zone Control Module	1	1	1
MDLS/W42	Dome Light	2	3	3
A44376-1W	White Lens	5	10	15
A44376-1R	Red Lens	5	10	15
A44376-1B	Blue Lens		As Required	
30-23-O182O	Lamp	10	20	30
A44835	Lamp Socket	2	4	6

3.6 Repair and Return Procedures

Repair and return of defective CARE/COM II-E equipment must be handled by authorized EXECUTONE representatives.

NOTE

Field repairs must not go beyond board-level replacements. Under no circumstances should any component-level field repairs be performed.

EXECUTONE Information Systems, Inc. maintains a repair facility (Repair Center) in Poway, California. This facility provides factory-authorized repair of certain EXECUTONE products. Both warranty and non-warranty service is available.

Defective equipment shipped to this Repair Center must include a completed Factory Repair (FR) form (part number 5914713). These pre-numbered forms are available for ordering from the Customer Service/Inside Sales department in Milford, Connecticut.

The pre-numbered FR form is the only authorization required to return defective equipment for repair. If items are received by the Repair Center without the FR included, they will be subject to a handling fee to cover expenses involved in the completion of this document.

Assemblies (whether in warranty or not) that are shipped with parts missing (e.g., faceplates or handsets) will be upgraded to include those missing parts. Replacement costs will be billed to the Distributor.

The Repair Center reserves the right to repair or replace any item, in whole or in part, with a similar unit. If the unit sent for repair must be returned, an indication should be made on the FR form. In this case the return may be delayed to accommodate the regular repair cycle.

The Repair Center also reserves the right to refuse a product intended for repair that is received in an unrepairable condition. When equipment is received in an unrepairable condition, the product will be returned at the Distributor's expense. Typical conditions that result in a classification of unrepairable include lightning damage, extreme abuse, fire, or other gross damage.

Defective CARE/COM II-E equipment, along with the corresponding FR form, must be shipped prepaid to:

EXECUTONE Information Systems, Inc. Warehouse & Repair Facility
12250 Kirkham Road, Suite A
Poway, California 92064

4. TESTING SEQUENCE

Testing the system is accomplished in layers, starting from testing for short circuits during the initial stages of the installation (with power OFF) to testing for proper operation after successful installation. Make sure the following tests are successfully completed:

Test the cabling with power OFF for shorts.
Test the cabling with power ON for proper voltages.

Test the stations for basic operation.

☐ Test the system for full operation.

4.1 Power Off Cabling Tests (Short Circuits)

After each cable group common run is terminated to the equipment panel, it needs to be thoroughly tested for short circuits with system power OFF. First test with the station wires disconnected, then retest with the station units connected.



Powering up the system with defects in the wiring could result in permanent equipment damage.

a. At the equipment panel, using an ohmmeter, measure between the two grounds to ensure a common reference. For the WN12-1 common run, the two conductors are the BLK (A or B at TB1) and BLK/WHT (TB1).

Expected result is a reading of zero (or a very low resistance).

b. Measure between ground and +12 volts. For the WN12-1 common run, the two conductors are the BLK or BLK/WHT (TB1) and YEL (TB1).

Expected result is a reading of infinite (or very high resistance).

 Measure between ground and +24 volts. For the WN12-1 common run, the two conductors are BLK or BLK/WHT (TB1) and RED (TB2 -24VA or 24VB).

Expected result is a reading of infinite (or very high resistance).

d. Repeat steps a. through c. for each cable run in the system.

If your readings do not match those above, you must correct the situation before power can be applied to the system.

4.2 Power On Cabling Tests (Proper Grounding)

After confirming for each cable run that there are no short circuits, the central equipment must be thoroughly tested for proper grounding. Note that this test requires the system power to be ON.

System Ground to Chassis Ground

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With system power ON, set your meter on the highest available DC AMPS scale (the current can be as high as 7 AMPS) and proceed as follows:

- a. On the backplane, place one test lead of your meter on any of the screw terminals marked GND (system ground) on terminal 5 or 6 at TB2.
- b. Place the other test lead on CH GND (on terminal 2 of TB7).

Expected result is a reading of zero.

12V and 24V to Chassis Ground

Make sure system power is ON and your meter is still set on the highest available DC AMPS scale. Then proceed as follows:

 a. To test 12V to chassis ground on the backplane, place one test lead on +12V (terminal 6 of TB1). Place the other test lead on CH GND (terminal 2 of TB7).

Expected result is a reading of zero.

- b. To test 24V to chassis ground, place one test lead on either 24VA or 24VB screw terminal on terminal strip TB1 or TB2. Place the other test lead on CH GND (terminal 2 of TB7).
- c. Perform the same test for the remaining 24V screw terminal.

Expected result for all 24V to chassis ground readings is a reading of zero.

If any current flow is measured during any of the tests described above, there is a short circuit in the system to chassis ground. To determine the location of the short, refer to <u>Figure 2</u>. In each example shown, the meter would complete the current path and show a reading when measured between chassis ground and any voltage point. The voltage used for measurement might "crowbar" or blow the fuse in the meter.

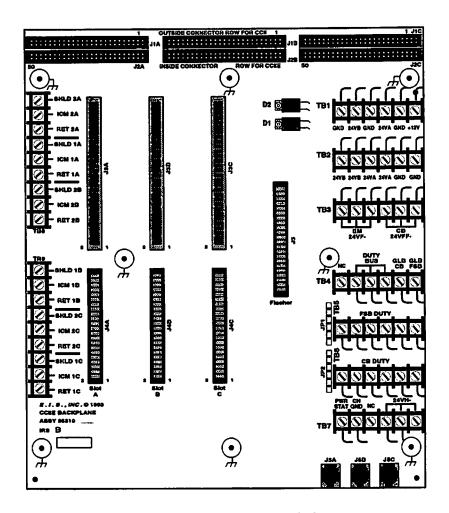
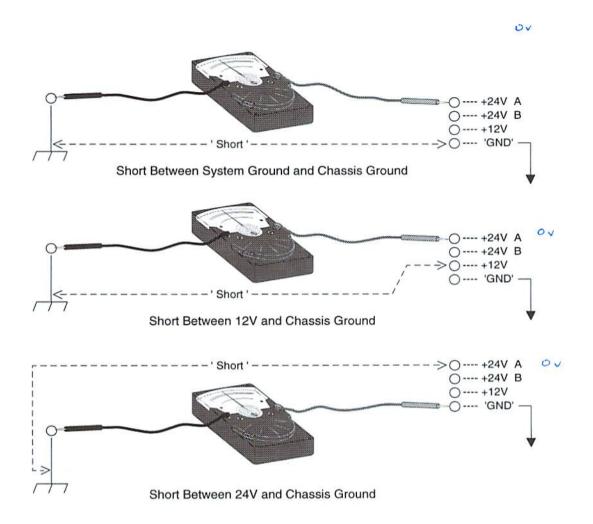


Figure 1. CARE/COM II-E Backplane



Note: The meter completes the current path and shows a reading when measured between chassis ground and any voltage point. The voltage used for measurement might (crowbar) or blow the fuse in the meter.

Figure 2. Detecting System Grounding Problems

4.3 Power On Cabling Tests (Proper Voltages)

After confirming for each cable run that there are no short circuits, thoroughly test each cable run for proper operating voltages. (Note that this test requires the system power to be ON and the station units to be connected).

Table 1 provides the values and voltages for various test points throughout the CARE/COM II-E system. These test points will determine the output of the power supply modules as well as the operating voltage out to the station units.

To test the cabling for proper voltages, reference <u>Figure 1</u> and Table 2, and proceed as follows:

- a. On the backplane of the equipment panel, check the power supply module(s) TB1 for proper voltages.
- b. On the backplane of the equipment panel, check the power supply voltages at TB2 for proper voltages.
- c. On the station unit, check terminal 2 of the P1 connector for proper voltage.

Table 2. CARE/COM II-E Voltages and Values

DESCRIPTION	EXPECTED TEST RESULT
in to the supposition of superior of the super	TB1-1 - Common
Power Supply Module	TB1-2 - +24 VB
	TB1-3 - Common
CCPSM/BBS	TB1-4 - +24VA
	TB1-5 - Common
	TB1-6 - +12V
Common Cable Run	TB2-1 - +24VB
	TB2-2 - +24VB
	TB2-3 - +24VA
	TB2-4 - +24VA
	TB2-5 - Common
	TB2-6 - Common
Power Conductors at Station Unit	P1-2 24V(+)

System Operational Tests

After the system is successfully installed (station units are installed in the backboxes), power up and use Section 500 to configure the stations, nurse control stations, and DSS consoles. Then run through the features in Section 200 and verify that the system is functioning properly. Remember to use the database data sheets in Appendix A when configuring the system.

If there are any failures during testing, refer to paragraphs 4 and 5 in this section.

NCS Self-Test 4.5

The self-test mode of the nurse control station allows the user to make sure each key is functioning properly. A DSS console which is "attached" to the NCS being tested, may be tested as well. To use the self-test:

a.	Lift the handset. Internal dial tone is heard.		
The h	The hands-free mode cannot be used to perform a self-test.		
b	Dial 7#. The NCS is placed in the test mode.		
	eyboard/LED Test>> will appear on the first line of the <i>Incoming Call</i> ay/Function Menu.		
0	Source: Indicates the NCS being tested. Code: Provides no information pertinent to the tester. Key: Corresponds to the key pressed.		
C.	Press each of the programmable keys.		
	The key code/sub-key code of the programmable key will appear in the key information. The fourth line of the <i>Incoming Call Display/Function Menu</i> provides a help section which defines the function of the key code/sub-key code.		
d	Press each digit on the dial pad.		

The key will be identified.

e. Press each of the feature keys.

The key will be identified.

Maintenance

f. Press each of the soft keys.

The key will be identified.

g. Press each of the SCROLL and VOLUME keys.

The key will be identified.

h. When the test is completed, return the handset on-hook.

5. PROBLEM IDENTIFICATION/DIAGNOSTICS

By going over the system in a logical and organized manner, you will be able to find the problem situations and correct it with as little difficulty as possible. In the event a problem arises, refer to the troubleshooting table during problem identification and solving.

5.1 Problem Report

The Problem Report identifies any current source(s) of trouble within the CARE/COM II-E system hardware. If a zone or flasher card failure occurs, or the system power is transferred from main power to alternate power source, a SERVICE indicator will appear on the nurse control station.

To access the service information:

a. Press the soft key associated with the SERVICE! message.

The first page of the problem report appears.

b.	Use the SCROLL keys to maneuver through the pages of the problem report list.	
Ţ	Page 1 indicates ZONES CURRENTLY ON BATTERY (lists odd-numbered zones)	
(Page 2 indicates ZONE FAILURES (lists odd-numbered zones)	
(Page 3 indicates FLASHER CARD FAILURES (lists odd-numbered zones associated with the failed flasher card)	
(Page 4 indicates HCP BATTERY STATUS	
	NOTE —	
	hough an odd-numbered zone is identified, the following even- ered zone is also included.	
☐ Battery status identifies both Main Control Unit and Expansion Unit battery.		

c. When finished viewing the Problem Report, press the ESC key and return the NCS to its idle state.

To access the SERVICE information from the *Incoming Call Display/Function Menu*, proceed as follows:

- a. Press the MENU soft key. The first page of the menu comes up.
- b. Using the SCROLL ▼ key, scroll down to the next page of the menu.
- c. Press the PROB soft key. The first page of the Problem Report is displayed on the NCS.

The Problem Report is a multi-page menu. Use the SCROLL keys to maneuver through the problem report list.

d. When finished viewing the Problem Report, press the ESC key and return the NCS to its idle state.

You can mute the tone signaling associated with service indications by pressing the **TONE MUTE** key while viewing the problem report. This will mute the tone signaling associated with the most current service indication(s) at all nurse control stations and duty stations. Any new problems that occur will cause the service tones to return.

If a problem does occur, contact your authorized EXECUTONE service representative.

5.2 Switch Settings

In order to insure the system is operating properly and as designed, take a moment to check the various switch settings throughout the system. Reference Figure 3 for the location of switches on the central equipment.

- a. Reset Switch, identified as SW2 on the Main Control Unit. This switch is used to perform a hard reset, which "clears" the system without defaulting any programming already performed. To properly reset the system, the switch must be pressed for a minimum of five seconds.
- b. Switch 1 on the Main Control Unit. Verify 1 and 2 of SW1 are set to the on position, and 3 and 4 are set to the off position. These settings permit the system to run with the EPROM system software (U41 1LOW and U42 1HIGH).

- c. The Model 36290-1Power Supply Module and Model CCPSM/BBS Power Supply Module with Battery Backup all must be set switch OFF to perform certain maintenance tasks, particuliarly when removing/ installing the ASI or flasher cards, and ON when system is operational.
- d. On the ASI card, set jumper J2 outward to generate a tone for the three call levels. Setting the switch towards the middle of the board shuts off the tone generated when a call is placed from a station. The flasher card's switch 1 is to remain at the factory setting (off), as this switch has no current use.
- e. Switch 2 of the Model CCP1S/W43 or CCP2S/W43 patient station is to be set to the inside to generate a normal call, or to the outside to generate an emergency call when a call origination device is removed from its receptacle.

Refer to <u>Section 430</u>, <u>Figure 5</u> for the location of these switches on the patient station.

f. Switch 3 of the duty/staff station, Model CCDSS/W43, sets the station operating mode for duty or staff. When the switch is set to the outside (towards pin 1), the station is set for duty mode. When the switch is set to the inside (towards pin 8), the station is set for staff mode of operation.

Refer to Section 430, Figure 12 for the location of this switch on the duty/staff station.

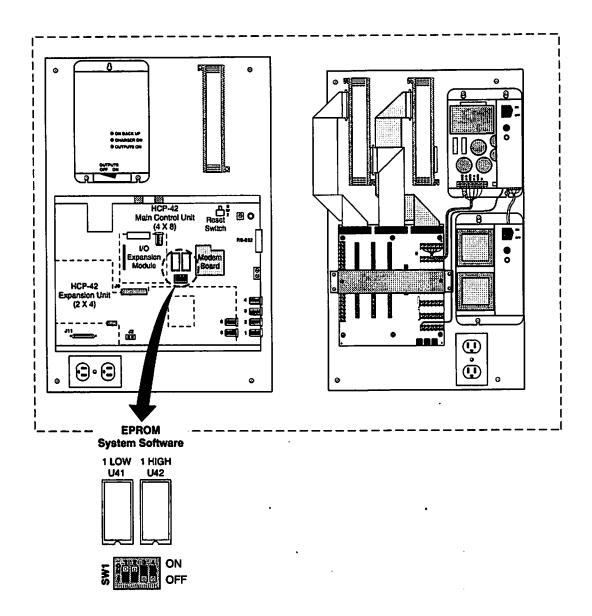


Figure 3. Central Equipment Switch Locations

5.3 RAM Chips

There are four RAM chips on the HCP-42 Main Control Unit located in positions U39, U40, U43 and U44. These chips provide the memory in the system. RAM chips that have backed out of their sockets may cause erratic operation in the system. Evidence of erratic operation includes NCS and DSSs operating improperly, and access to system programming may be effected.

To restore correct operation to the system, proceed as follows: NOTE For static protection, be sure to wear a wrist-strap when handling RAM chips.		
	a.	Verify that the RAM chips are located in their respective positions.
		If any chips are missing, replace with part number 16-09-66204.
	b.	Gently remove each of the four RAM chips from their sockets using an EPROM extractor or similar tool.
	c.	Verify that all pins are straight. Ensure the keyway is situated correctly and re-insert the chips into their correct locations (U39, U40, U43 and U44).
	d.	Verify that each pin is seated in a socket. Pins must not be bent or located outside of the socket.
_	lf s	nny of the pins are bent or are located outside of the socket, remove
_		corresponding chip.
۵		raighten the pins and re-insert the RAM chip so it is properly ated.

6. PRODUCT CARE INSTRUCTIONS

To insure a long-lasting, reliably operating system, the user should take certain measures to safeguard operation.

Use caution to avoid spilling or directly spraying liquids onto the NCS or DSS key pad surface. Water and other liquid substances can cause erratic operation by providing insufficient contact of the keys. Spilled liquids can also penetrate the NCS and DSS plastic and cease operation entirely.

To safely clean CARE/COM II-E equipment:



Use cleaners that are distinguished as safe for acrylics and polycarbonates, preferably isopropyl alcohol or denatured alcohol. NEVER use any product containing trichloroethane or freon. These chemicals will disintegrate the plastic, therefore, any hardware items exposed to these chemicals should be removed and replaced immediately.

- Use a non-abrasive cleaner, preferably isopropyl or denatured alcohol, applied to a soft, lint-free cloth.
- Cleaner should be used sparingly.
- ☐ Do not spray cleaning solvents directly onto key pads or speakers (found on the NCS, DSS, patient and duty/staff stations).

7. TROUBLESHOOTING

Although the CARE/COM II-E Technical Manual does not contain elaborate troubleshooting procedures at this time, Table 3 presents "common" problems encountered in field installations, and the simple solutions.

Table 3. Common Problems/Solutions

	SYMPTOM/PROBLEM	SOLUTION
1	Ticking, squeeling, or static noise on NCS audio line when making a call from the NCS to a patient station.	Replace PIC chip (p/n 36347) on audio board of ASI card.
2	No audio present on cable group. Station(s) in affected cable group do not register on NCS.	Control and annunciator lines (home run) must match with corresponding cable groups (ex. cable group 1 = stations 1 - 12, cable group 2 = stations 13 - 24, etc.) Reference Section 410.
3	No paging function. The last two station units of a cable group will not operate.	50-pair ribbon cable(s) on the backplane must be plugged into the lower three connectors (J2A, J2B and J2C) for CARE/COM II-E systems.
4	Beeping tones on the NCS audio when using the handset.	Set jumper J2 on the ASI card to the correct setting for "NO BEEP". Reference Section 410.
5	Excessive noise/static on the audio path.	Be sure that system is properly grounded with #12AWG wire. Reference Section 410.
6	Once system is powered up, NCS(s) and station unit(s) will not operate.	Insure bridging clips are installed on the M66 blocks.
7	Random operation of stations in a cable group.	Insure the amphenol connectors of the female-female 25-pair cable are inserted completely and fit properly at each connection (Main Control/Expansion Unit and M66 Blocks)
8	Intermittent service beeps heard at the NCS.	Software version 0.1.0a17, or above, must be installed. Check programming for battery status. Check J1 connection to center pin on CCPSM/BBS power supply module. Change the Power Status from 1 to 5 seconds. Contact Technical Operations for assistance.
9	Handsfree operation is too loud and audio is garbled.	Handsfree circuit must be adjusted. Contact Technical Operations for assistance.

TABLE OF CONTENTS

Part Number	Description	Tech Spec Number ¹
36300-1	Equipment Panel	TS52000 Issue A
36280-1	Auxiliary Panel	TS52001 Issue A
CCPSM/BBS	Power Supply Module	TS40141 Issue B
36290-1	Power Supply Module	TS52002 Issue A
A47094S/W	Dual Equipment Cabinet	TS40921 Issue B
A47445S/W	Single Equipment Cabinet	TS40920 Issue B
11474455711	Single Equipment Cubinet	15 (0)20 13520 2
36400-1	Nurse Control Station	TS52003 Issue A
36470-1	Nurse Control Station Receptacle	TS52003 Issue A
36500-1	Direct Station Selection Console	TS52004 Issue A
CCP1S/W43	Single Patient Station	TS40120 Issue B
CCP2S/W43	Dual Patient Station	TS40121 Issue B
CCPCS/W43	Single Patient Sideguard Station	TS40107 Issue B
3080215	Dual Patient Sideguard Station	TS40108 Issue B
EX-ZCM3	Zone Control Module	TS40913 Issue B
CCDSS/W43	Duty/Staff Station	TS40122 Issue B
PCU-3, -15	Three-Button Patient Control Unit	TS40906 Issue B
PCU-3IC, -15	Three-Button Patient Control Unit	TS40906 Issue B
M282	Call Origination Button	TS40910 Issue B
M518X	Cordset	TS40909 Issue B
M88	Geriatric Call Button	TS40908 Issue B
M18A, -15	Call Button Cordset	TS40907 Issue B
		7777777
36920-1	Code Blue Station	TS52005 Issue A
36900-2	Emergency Station	TS52006 Issue A
MDLS/W42	Four-Section Dome Lamp	TS40911 Issue B
31780-2	Single Entertainment Interface	TS50045 Issue C
31770-2	Dual Entertainment Interface	TS50045 Issue C
33920-1	Single Television and Light Interface	TS50048 Issue C
33920-2	Dual Television and Light Interface	TS50048 Issue C
J7390RCS/W43P	Radio/TV and Comfort Control	TS40917 Issue B
J7376R1S/W43P	Radio/TV Selector Units	TS40915 Issue B
J7376R2S/W43P	Radio/TV Selector Units	TS40915 Issue B
J7377C1S/W43P	Comfort Control Units	TS40916 Issue B
J7377C1S/W43P	Comfort Control Units	TS40916 Issue B
M-217/4101	Power Supply	TS40930 Issue B
AVA OFF FF TAVA	- a man dakkah	
WN16-1	Cable	TS40990 Issue A
WN12-1	Cable	TS40991 Issue A
WN08-3RD	Cable	TS40992 Issue A
WN08-3BL	Cable	TS40992 Issue B
WN08-3GY	Cable	TS40979 Issue B

Technical Specifications

Part Number	Description	Tech Spec Number	
WN05-1	Cable	TS40977 Issue B	
WN04-2GY	Cable	TS40987 Issue B	
WN03-2	Cable	TS40982 Issue B	
WN02-4GY	Cable	TS40986 Issue B	
WN02-3	Cable	TS50057 Issue B	
WN02-2	Cable	TS40984 Issue B	
421764	Cable	TS40993 Issue A	
422824	Cable	TS40993 Issue A	

¹ It is very important to know that technical specifications cannot be ordered singly. This means that the number found on the bottom of the technical specification sheets is used only for determining the current revision level of the tech spec.

This section contains the technical specifications sheets for the EXECUTONE® CARE/COM® II-E Nurse Call System. A tech spec sheet for each major system component contains a graphic to identify the equipment and the pertinent technical information in outline form. On the back of each tech spec is the technical information from the front page reworded to serve as a guide when writing about that particular piece of equipment in the system specification.

For assistance with specific details such as drawings for wiring, conduit layout, etc., architects and engineers should contact their local EXECUTONE distributor.

NOTE: Design and specifications are subject to change without notice. The information in the technical specifications may not reflect the latest equipment design; again, architects and engineers should contact their local EXECUTONE distributor.

Model 36300-1

EQUIPMENT PANEL CARE/COM II-E

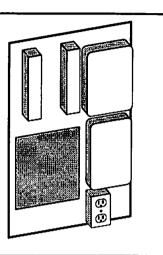
SUPPORTS UP TO 72 STATION UNITS

° FLEXIBLE MODULAR DESIGN

° PROVISION FOR OPTIONAL FEATURES

° EASY CONNECT INSTALLATION BLOCK

° PLUG-IN PRINTED CIRCUIT BOARDS





DESCRIPTION

Equipment panel designed to handle a floor or area system with up to 72* patient, duty/staff, code blue and/or emergency stations.

* This number is based upon single annunciation lines. Each dual annunciation line would diminish this number by one.

ENVIRONMENTAL REQUIREMENTS

Temperature Range: 0° to 30° C (32° to 85° F). Relative Humidity: 10 - 85% noncondensing.

POWER REQUIREMENTS

Power provided by one Model CCPSM/BBS Power Supply Module with Battery Backup, ordered separately.

EQUIPMENT FURNISHED

The following equipment is furnished and factory mounted onto the equipment panel:

Backplane with card cage (one) M66 Block (one) Ribbon Cable (two) AC receptacle

ADDITIONAL ADD-ON EQUIPMENT

The following equipment mounts on the equipment panel and is ordered separately:

Model CCPSM/BBS Power Supply Module with

Battery Backup

Model HPNBATT 12V Battery (two per)

Model 49-07-00001 M66 Block, or

Model 49-07-00002 M66 Block w/RJ11 (one)

Model 36318-1 Ribbon Cable (one)

Model 36320-1 ASI Card w/Audio Card (one

required, capacity of three)

Model 36340-1 Flasher Card (one)

HOUSING, FINISH AND DIMENSIONS

Equipment panel finished with zinc dichromate, mounts into an equipment cabinet, type A47445 or A47094, available separately. The maximum dimensions are: 20-1/2" (52.07 cm) wide x 32" (81.28 cm) high x .56" (1.42 cm) deep.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS EQUIPMENT PANEL

The equipment panel shall be designed to handle a complete floor or area system with a combination of up to 72* patient, duty/staff, code blue and/or emergency stations. (*This number is based upon single annunciation lines. Each dual annunciation line would diminish this number by one.)

To provide the best possible long term performance of the system, the equipment panel shall be located in an environment with a temperature of 0° to 30° C (32° to 85° F). Relative humidity of 10 - 85% noncondensing.

The following equipment shall be furnished and factory mounted onto the equipment panel: one backplane with card cage, one M66 block, two ribbon cables, and AC receptacle.

The following additional equipment shall be mounted on the equipment panel and ordered separately:

Model CCPSM/BBS Power Supply Module with Battery Backup

Model HPNBATT 12V Battery (two per)

Model 49-07-00001 M66 Block, or

Model 49-07-00002 M66 Block w/RJ11 (one)
Model 36318-1 Ribbon Cable (one)

Model 36320-1 ASI Card w/Audio Card (one required, capacity of three)

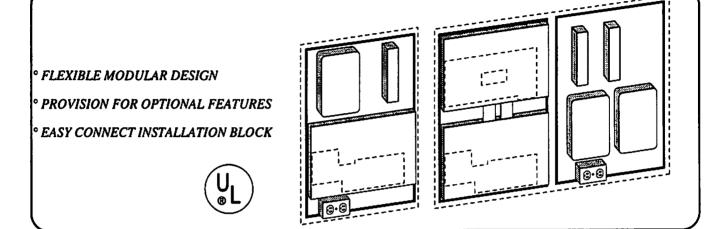
Model 36340-1 Flasher Card (one)

Power for the panel shall be provided by one Power Supply Module with Battery Backup, and shall plug into the AC receptacle mounted on the equipment panel. AC power shall be installed in accordance with all applicable national and local codes, and shall connect to the facility's alternate power source as defined in NFPA 70 and NFPA 99.

All assemblies shall be mounted on the equipment panel finished in zinc dichromate. The panel shall be used with equipment cabinet types A47445 or A47094, available separately. The maximum dimensions of the equipment panel shall be 20-1/2" (52.07 cm) wide x 32" (81.28 cm) high x .56" (1.42 cm) deep.

Model 36280-1

AUXILIARY PANEL CARE/COM II-E



DESCRIPTION

Auxiliary panel designed to handle 8 - 12 digital ports (on one panel) to provide connections for a combination of ASIs, NCSs, or DSSs. An additional panel, housed in a double-width or separate single-width cabinet, expands the system capacity to 20 - 28 digital ports.

ENVIRONMENTAL REQUIREMENTS

Temperature Range: 0° to 30° C (32° to 85° F). Relative Humidity: 10 - 85% noncondensing.

POWER REQUIREMENTS

Power provided by up to two Model 36290-1 Power Supply Module(s) with Battery Backup, ordered separately.

INTERFACE TO THIRD PARTY EQUIPMENT

Interface provided for remote diagnostics and maintenance utilizing a 1200 baud modem. In addition, connections (determined by zone number) are provided to install up to four amplifiers for expanded paging coverage.

EQUIPMENT

The following equipment mounts on the auxiliary panel and is ordered separately:

Model 36100-1	(4 x 8) Main Control Unit with 1200 baud modem
Model 36290-1	Power Supply Module with Battery Backup
Model 34-04-12007	12V Battery (two)
Model 23120	(2 x 4) Expansion Card
Model 36200-1	(4 x 8) Expansion Unit
Model 23220	(4 x 8) Expansion Card
Model 49-07-00001	M66 Block, or
Model 49-07-00002	M66 Block w/RJ11 (one)
Model 01070-1	Female-to-female 25-pair cable
	•

HOUSING, FINISH AND DIMENSIONS

Auxiliary panel finished with zinc chromate, mounts into an equipment cabinet, type A47445 or A47094, available separately. The maximum dimensions are: 20-1/2" (52.07 cm) wide x 32" (81.28 cm) high x .56" (1.42 cm) deep.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

AUXILIARY PANEL

(One) auxiliary panel shall be designed to handle 8 -12 digital ports to provide connections for a combination of ASIs, NCSs, or DSSs. An additional panel, mounted in a double-width or separate single-width cabinet, expands the system capacity to 20 - 28 digital ports.

To provide the best possible long term performance of the system, the auxiliary panel shall be located in an environment with a temperature of 0° to 30° C (32° to 85° F). Relative humidity 10 - 85% noncondensing.

The following equipment shall be mounted on the auxiliary panel and ordered separately:

Model 36100-1	(4 x 8) Main Control Unit with 1200 baud modem
Model 36290-1	Power Supply Module with Battery Backup
Model 34-04-12007	12V Battery (two)
Model 23120	(2 x 4) Expansion Card
Model 36200-1	(4 x 8) Expansion Unit
Model 23220	(4 x 8) Expansion Card
Model 49-07-00001	M66 Block, or
Model 49-07-00002	M66 Block w/RJ11 (one)
Model 01070-1	Female-to-female 25-pair cable

Power for the system shall be provided by up to two Power Supply Module(s) with Battery Backup, and shall plug into the AC receptacle mounted on the auxiliary panel. AC power shall be installed in accordance with all applicable national and local codes, and shall connect to the facility's alternate power source as defined in NFPA 70 and NFPA 99.

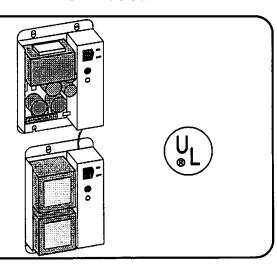
Interface shall be provided for remote diagnostics and maintenance with a 1200 baud modem. In addition, up to four amplifiers for expanded paging coverage.

All assemblies shall be mounted on the auxiliary panel finished in zinc dichromate. The panel shall be used with equipment cabinet types A47445 or A47094, available separately. The maximum dimensions of the equipment panel shall be 20-1/2" (52.07 cm) wide x 32" (81.28 cm) high x .56" (1.42 cm) deep.

Model CCPSM/BBS

POWER SUPPLY MODULE CARE/COM II CARE/COM II-E

- * BATTERY BACKUP SYSTEM FOR UNINTERRUPTABLE POWER CIRCUIT
- OVERLOAD AND SHORT CIRCUIT PROTECTION
- ° EXTERNALLY ACCESSIBLE FUSES
- ° COMPACT, STURDY METAL HOUSING



DESCRIPTION

Power supply module with full battery backup system consisting of two +24VDC/3A unregulated outputs and one +12VDC/5A regulated output. One module required for system with up to 60 patient stations (Care/Com II), 72 patient stations (CARE/COM II-E).

ENVIRONMENTAL REQUIREMENTS

Temperature Range: 0° to 30° C (32° F to 85° F). Relative Humidity: 10 - 85% noncondensing.

POWER REQUIREMENTS

120 volts ± 10% 60 Hz AC, 15 Amp computer grade service line. Maximum power consumption: 350VA/1200 BTU.

REGULATED +12V OUTPUT

Voltage: Factory adjusted for +12.4 VDC to =12.5 VDC.

Current: 0 to 5 amperes.

Ripple and Noise: Less than 100 mV peak to peak at

120VAC - 10% input.

Line and Load Regulation: 0.1% maximum for an AC

input variation of 10% from 120VAC.

Load Regulation: 1% maximum for no load to full

load to no load variation.

Voltage Overshoot: Less than 100 mv. Voltage Drift vs. Temperature: 2mv/°C.

UNREGULATED +24V OUTPUTS

Voltage: Factory adjusted for +24VDC nominal.

Current: 3 amperes maximum.

Ripple: Less than 100mv peak to peak at 120VAC

±10% input.

CIRCUIT PROTECTION

+12VDC: Current limiting and overvoltage crow-bar protection circuitry.

+24VDC: Current limiting.

AC Line: 3.2A slo-blo replaceable fuse. Battery Backup: 20A replaceable fuse.

CONTROLS AND INDICATORS

One AC ON/OFF switch with indicator and one battery backup ON/OFF switch. One green LED indicator per +24VDC output, one green LED indicator for the +12 VDC output, one "CHARGER ON", "ON BACKUP", and "LOW BATTERY" LED.

DESIGN

Open frame construction with heavy duty, strain relieved, 6' line cord with molded three-prong plug. A terminal strip is provided for connections

FINISH AND DIMENSIONS

Gray enamel metal chassis. Maximum dimensions are: power supply - 9" (22.86 cm) wide x 11-1/4" (28.57 cm) high x 4-1/4" (11.43 cm) deep. Backup - 6-3/4" (17.14 cm) wide x 11-1/4" (28.57 cm) high x 4-3/4" (12.06 cm) deep.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS POWER SUPPLY MODULE

The power supply module with battery backup shall be designed for use in the CARE/COM II-E system and shall include one regulated +12VDC/5A output and two +24VDC/3A unregulated outputs. One power supply module shall be required for system with up to 60 patient stations (Care/Com II), 72 patient stations (CARE/COM II-E). Full load operation for minimum of 20 minutes (Care/Com II) or approximately 10 minutes (CARE/COM II-E) in the event of a power failure via the battery backup system.

The operating/storage temperature shall be 0° to 30° C (32° to 85° F). Relative humidity of 10 - 85% noncondensing.

The input power requirements shall be $120\text{VAC} \pm 10\%$, $60\text{ Hz} \pm 5\%$ computer grade line. The maximum power consumption shall be 350VA/1200 BTU. The power supply module shall be equipped with one AC ON/OFF switch. The AC line shall be protected by a 3.2A slo-blo replaceable type fuse.

The ± 12 VDC shall be factory adjusted for ± 12.4 VDC to ± 12.5 VDC. The current shall be 0 to 5A. The ripple and noise shall be less than 100mv peak to peak at 120VAC $\pm 10\%$ input. Line regulation shall be $\pm 0.1\%$ maximum for an AC input variation of $\pm 10\%$ from 120VAC nominal. Load regulation shall be 1% maximum for a no load to full load or full load to no load variation. Voltage overshoot shall not be greater than 100 mv and voltage drift versus temperature shall be ± 2 mv/°C.

The regulated +12 volt output shall use current limiting to protect the power supply circuitry for any overload or short circuit condition. The +12 volt output shall also have an overvoltage transient voltage suppressor to protect the external load from an overvoltage transient or power supply failure. The clamping point for the overvoltage circuit shall be factory set to between +14.3 VDC to +15.8 VDC. The +12VDC output shall be monitor by a green status indicator (LED).

The two unregulated ± 24 volt output voltages shall be ± 24 VDC. The current shall be 3A maximum. Ripple shall be less than 100 mv peak to peak at 120VAC $\pm 10\%$ input. The ± 24 VDC unregulated section shall use current limiting to protect the power supply circuitry for any overload or short circuit condition.

The battery backup operation shall be provided by two 12 VDC 8AHR batteries wired in series. These batteries shall be integral to the design of the power supply module with a connectorized cable connecting the batteries to the module, and an ON/OFF switch for turning the battery backup system on or off. Battery backup output shall be protected by a 20A replaceable fuse.

To show the current operating status, the battery backup shall be equipped with the following indicators: one "CHARGER ON", "ON BACKUP", and "LOW BATTERY" LED.

The power supply module shall be connected to the input AC line by means of a heavy duty, strain relieved six foot line cord and molded three-prong plug. For ease of installation and maintenance, connections shall be made via a terminal strip with screw type connections. The power supply module shall not require forced air cooling.

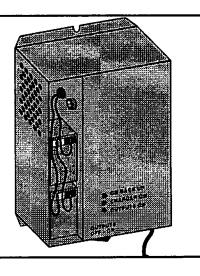
NOTE: For the CARE/COM II-E system; the CCPSM/BBS Power Supply Module shall maintain system power during the facility power transfer from main power to alternate power source as specified in NFPA 70 and NFPA 99.

The power supply module with battery backup shall utilize open-frame construction and shall be designed to mount onto a Model 36300-1 Equipment Panel. The maximum dimensions shall be: **power supply** - 9" (22.86 cm) wide x 11-1/4" (28.57 cm) high x 4-1/4" (11.43 cm) deep. **Battery backup** - 6-1/4" (17.14 cm) wide x 11-1/4 (28.57 cm) high x 4-1/4" (12.06 cm) deep.

Model 36290-1

POWER SUPPLY MODULE CARE/COM II-E

- * BATTERY BACKUP SYSTEM FOR UNINTERRUPTABLE POWER CIRCUIT
- OVERLOAD AND SHORT CIRCUIT PROTECTION
- EXTERNALLY ACCESSIBLE FUSES
- ° VENTILATED, STURDY METAL HOUSING
- ° COMPACT, STURDY METAL HOUSING





DESCRIPTION

Uninterruptable power supply module with internally integrated battery backup system. All outputs are regulated and consist of +12VDC/1.6A, +17VDC/1.7A, and -17VDC/1.7A. One power supply required for 2 x 4 system expansion. Additional power supply required for 4 x 8 system expansion with up to 28 ports. Battery backup shall maintain full load operation for approximately ten minutes (depending on system load).

ENVIRONMENTAL REQUIREMENTS

Temperature Range: 0° to 30° C (32° F to 85° F). Relative Humidity: 10 - 85% noncondensing.

POWER REQUIREMENTS

120 volts ± 10% 60 Hz AC, 15 Amp computer grade service line. Maximum power consumption: 130VA/450 BTU.

REGULATED +12V OUTPUT

Voltage: Factory adjusted for +12.4 VDC to +12.5 VDC. Current: 0 to 1.6 amperes.

Ripple and Noise: Less than 100 mV peak to peak at $120\text{VAC} \pm 10\%$ input. Line Regulation: 0.1% maximum for an AC input variation of $\pm 10\%$ from 120VAC. Load Regulation: 1% maximum for no load to full load to no load variation. Voltage Overshoot: Less than 100 mv. Voltage Drift vs. Temperature: $\pm 2\text{mv}/^{\circ}\text{C}$.

REGULATED +17V AND -17V OUTPUTS

Voltage: Factory set for 17VDC. Current: 0 to 1.7 amperes maximum. Ripple and Noise: Less than 100mv peak to peak at 120VAC ±10% input. Line Regulation: ±0.1% maximum for an AC input variation of ±10% from 120VAC. Load Regulation: 1% maximum for a no load to full load to no load variation. Voltage Overshoot: Less than 100mv. Voltage Drift vs. Temperature: ±2mv/°C.

CIRCUIT PROTECTION

12VDC, +17VDC, -17VDC: Current limiting and overvoltage protection circuitry. AC Line: Internal non-replaceable 1.5A slo-blo fuse. Battery Backup: 5A replaceable slo-blo fuse for reverse battery protection. Low battery protection circuitry to protect battery from excessive discharge.

DESIGN

Ventilated, full steel enclosure with heavy duty, strain relieved, 6' line cord with molded three-prong plug. For output connections, a closed entry connector is provided along with a system interconnecting cable.

FINISH AND DIMENSIONS

Gray enamel metal chassis. Maximum dimensions are: 7-3/8" (18.75 cm) wide x 12" (30.48 cm) high x 4" (10.16 cm) deep.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS POWER SUPPLY MODULE

The uninterruptable power supply module with internally integrated battery backup shall be designed for use in the CARE/COM II-E system and shall include regulated outputs of +12VDC/1.6A, +17VDC/1.7A, and -17VDC/1.7A. One power supply module shall be required for systems with a 2 x 4 system expansion. An additional power supply shall be required for a 4 x 8 system expansion with up to 28 ports. Full load operation for approximately 10 minutes shall be possible in the event of a power failure via the battery backup system.

The storage/operating temperature shall be 0° to 30° C (32° to 85° F). Relative humidity of 10 - 85% noncondensing.

The input power requirements shall be $120VAC \pm 10\%$, 60 Hz, 15 Amp computer grade line. The maximum power consumption shall be 130VA/450 BTU. The power supply module shall be equipped with one AC ON/OFF switch.

The ± 12 VDC shall be factory adjusted for ± 12.4 VDC to ± 12.5 VDC. The current shall be 0 to 1.6A. The ripple and noise shall be less than 100mv peak to peak at 120VAC $\pm 10\%$ input. Line regulation shall be $\pm 0.1\%$ maximum for an AC input variation of $\pm 10\%$ from 120VAC nominal. Load regulation shall be 1% maximum for a no load to full load or full load to no load variation. Voltage overshoot shall be less than 100 mv and voltage drift versus temperature shall be ± 2 mv/°C.

The two regulated 17 volt output voltages shall be $\pm 17VDC$ and $\pm 17VDC$. The current shall be 0 to 1.7A maximum. Ripple shall be less than 100 mv peak to peak at $\pm 120VAC \pm 10\%$ input. The ripple and noise shall be less than $\pm 120VAC \pm 10\%$ input. Line regulation shall be $\pm 0.1\%$ maximum for an AC input variation of $\pm 10\%$ from $\pm 120VAC$ nominal. Load regulation shall be 1% maximum for a no load to full load or full load to no load variation. Voltage overshoot shall be less than 100 mv and voltage drift versus temperature shall be $\pm 2mv$ /°C.

The power supply module shall be current limiting to protect the power supply circuitry against overvoltage condition.

The battery backup operation shall be provided by two 12 VDC 8AHR batteries wired in series. Battery backup output shall be protected by a 5A replaceable slo-blo fuse. Low battery protection shall be provided to protect the battery from excessive discharge.

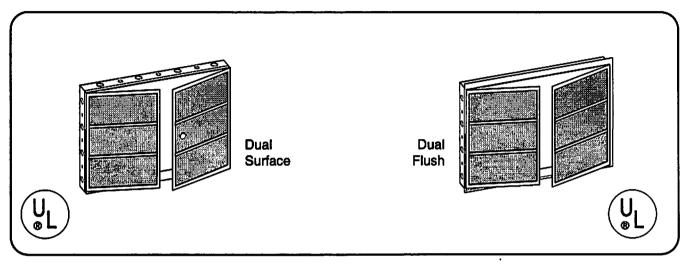
To show the current operating status, the power supply module shall be equipped with the following LED indicators: one green "OUTPUTS ON", as well as one "CHARGER ON" and "LOW BATTERY" LED.

The power supply module shall be housed in a ventilated, full steel enclosure and connect to the input AC line by means of a heavy duty, strain relieved six foot line cord with molded three-prong plug. For output connections, a closed entry connector is provided along with a system interconnecting cable. The power supply module shall not require forced air cooling.

The power supply module with battery backup shall utilize open-frame construction and shall be designed to mount onto a Model 36280-1 Auxiliary Panel. The maximum dimensions shall be: 7-3/8" (18.75 cm) wide x 12" (30.48 cm) high x 4" (10.16 cm) deep.

Models A47094S & A47094W

DUAL EQUIPMENT CABINETS



Model A47094S

DESCRIPTION

Model A47094S is a two-door, vented surfacemounted dual equipment cabinet with three-point catch and handle on right-hand door.

MOUNTING DETAILS

Back of cabinet provided with eight mounting holes. Eight weldnuts for installation of one equipment panel and one power supply panel, or one equipment panel and one auxiliary panel on the CARE/COM II-E system.

CONDUIT KNOCKOUTS

Top and Bottom: four 2-1/2" (6.35cm), 2" (5.08cm), 1-3/8" (3.47cm), 1-1/8" (2.84cm), and 7/8" (2.2cm) conduit knockouts. Sides: three 2-1/2" (6.35cm), 2" (5.08cm), 1-3/8" (3.47cm), 1-1/8" (2.84cm), and 7/8" (2.2cm) conduit knockouts.

HOUSING AND FINISH

#14AWG C.R.S. cabinet with zinc chromate finish.

DIMENSIONS

Doors: Two, each 24" (61cm) wide x 36" (91.44cm) high. Cabinet: 48" (121.9cm) wide x 36" (91.44cm) high x 6" (15.24cm) deep.

Model A47094W

DESCRIPTION

Model A47094W is a two-door, vented, flush-mounted dual equipment cabinet with three-point catch and handle on right-hand door.

MOUNTING DETAILS

Back of cabinet provided with eight mounting holes. Eight weldnuts for installation of one equipment panel and one power supply panel, or one equipment panel and one auxiliary panel on the CARE/COM II-E system.

CONDUIT KNOCKOUTS

Top and Bottom: four 2-1/2" (6.35cm), 2" (5.08cm), 1-3/8" (3.47cm), 1-1/8" (2.84cm), and 7/8" (2.2cm) conduit knockouts. Sides: three 2-1/2" (6.35cm), 2" (5.08cm), 1-3/8" (3.47cm), 1-1/8" (2.84cm), and 7/8" (2.2cm) conduit knockouts.

HOUSING AND FINISH

#14AWG galvanized metal backbox; #12AWG C.R.S. doors and flange, zinc chromate finish.

DIMENSIONS

Faceplate: 50" (127cm) wide x 38" (96.52cm) high -

includes doors and 2" (5.08cm) flange.

Backbox: 48" (121.9cm) wide x 36" (91.44cm) high x

6" (15.24cm) deep.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

A47094S DUAL EQUIPMENT CABINET

The Model A47094S surface-mounted dual equipment cabinet shall be provided with two vented hinged doors. A flush catch and ring handle shall be provided on the door to prevent snagging. To facilitate ease of installation, eight weldnuts shall be provided for installing one equipment panel and one power supply panel. For CARE/COM II-E: to facilitate ease of installation, eight weldnuts shall be provided for installing one panel each: an equipment panel (mounted on the right) and auxiliary panel (mounted on the left).

For complete flexibility of conduit entrance into cabinet, the following shall be provided: **top and bottom** - four 2-1/2" (6.35cm), 2" (5.08cm), 1-3/8" (3.47cm), 1-1/8" (2.84cm), and 7/8" (2.2cm) conduit knockouts; **sides** - three 2-1/2" (6.35cm), 2" (5.08cm), 1-3/8" (3.47cm), 1-1/8" (2.84cm), and 7/8" (2.2cm) conduit knockouts.

Eight mounting holes shall be provided for attaching cabinet to wall. The cabinet shall be constructed of #14AWG C.R.S. with a zinc chromate finish. The dimensions shall be: **door** - two, each 24" (61cm) wide x 36" (91.44cm) high, **cabinet** - 48" (121.9cm) wide x 36" (91.44cm) high x 6" (15.24cm) deep.

A47094W DUAL EQUIPMENT CABINET

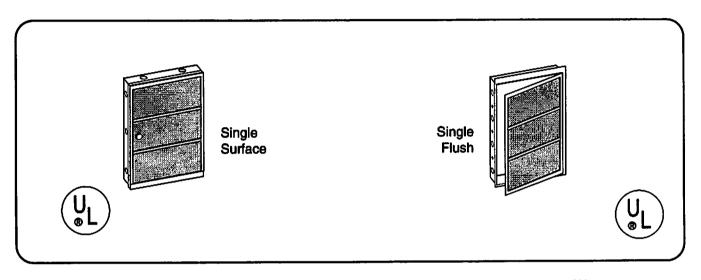
The A47094W flush-mounted dual equipment cabinet shall be provided with two vented hinged doors. A flush catch and ring handle shall be provided on the door to prevent snagging. To facilitate ease of installation, eight weldnuts shall be provided for installing one equipment panel and one power supply panel. For CARE/COM II-E: to facilitate ease of installation, eight weldnuts shall be provided for installing one panel each; an equipment panel (mounted on the right) and auxiliary panel (mounted on the left).

For complete flexibility of conduit entrance into cabinet, the following shall be provided: **top and bottom** - four 2-1/2" (6.35cm), 2" (5.08cm), 1-3/8" (3.47cm), 1-1/8" (2.84cm), and 7/8" (2.2cm) conduit knockouts; **sides** - three 2-1/2" (6.35cm), 2" (5.08cm), 1-3/8" (3.47cm), 1-1/8" (2.84cm), and 7/8" (2.2cm) conduit knockouts.

Eight mounting holes shall be provided for attaching cabinet to wall. The rust-resistant backbox shall be constructed of #14AWG galvanized metal. The door and flange shall be constructed of #12AWG C.R.S. and shall have a zinc chromate finish. The dimensions shall be: faceplate - including door and 2" (5.08cm) flange, 50" (127cm) wide x 38" (96.52cm) high; backbox - 48" (121.9cm) wide x 36" (91.44cm) high x 6" (15.24cm) deep.

Models A47445\$ & A47445W

SINGLE EQUIPMENT CABINETS



Model A47445S

DESCRIPTION

Model A47445S is a surface-mounted equipment cabinet with vented hinged door. The door is provided with a flush catch and ring handle.

MOUNTING DETAILS

Back of cabinet provided with four mounting holes. Four weldnuts for installation of one equipment panel or one power supply panel (Care/Com II) or one auxiliary panel (CARE/COM II-E).

CONDUIT KNOCKOUTS

Top and Bottom: Four combination 1-1/2" (3.8cm), 2" (5.08cm) and three combination 1/2" (1.3cm), 3/4" (1.9cm) and 1" (2.54cm) conduit knockouts. Sides: Three combination 1-1/2" (3.8cm), 2" (5.08cm) and three combination 1/2" (1.3cm), 3/4" (1.9cm) and 1" (2.54cm) conduit knockouts.

HOUSING AND FINISH

#14AWG C.R.S. cabinet with zinc chromate finish.

DIMENSIONS

Door: 24" (61cm)W x 36" (91.44cm)H. Cabinet: 24" (61cm)W x 36" (91.44cm)H x 6"

(15.24cm)D.

Model A47445W

DESCRIPTION

Model A47445W is a flush-mounted equipment cabinet with vented hinged door and surface flange. The door is provided with a flush catch and ring handle.

MOUNTING DETAILS

Back of cabinet provided with four mounting holes. Four weldnuts for installation of one equipment panel or one auxiliary panel.

CONDUIT KNOCKOUTS

Top and Bottom: Four combination 1-1/2" (3.8cm), 2" (5.08cm) and three combination 1/2" (1.3cm), 3/4" (1.9cm) and 1" (2.54cm) conduit knockouts. Sides: Three combination 1-1/2" (3.8cm), 2" (5.08cm) and three combination 1/2" (1.3cm), 3/4" (1.9cm) and 1" (2.54cm) conduit knockouts.

HOUSING AND FINISH

#14AWG galvanized metal backbox; #14AWG C.R.S. door and flange, zinc chromate finish.

DIMENSIONS

Faceplate: 26" (66cm)W x 38" (96.52cm)H - includes

door and 2" (5.08cm) flange.

Backbox: 24" (61cm)W x 36" (91.44cm)H x 6"

(15.24cm)D.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

A47445S SINGLE EQUIPMENT CABINET

The Model A47445S surface-mounted single equipment cabinet shall be provided with a vented hinged door. A flush catch and ring handle shall be provided on the door to prevent snagging. To facilitate ease of installation, four weldnuts shall be provided for installing one equipment panel or one power supply panel (Care/Com II) or one auxiliary panel (CARE/COM II-E).

For complete flexibility of conduit entrance into cabinet, the following shall be provided: **top and bottom** - four combination 1-1/2" (3.8cm), 2" (5.08cm) and three combination 1/2" (1.3cm), 3/4" (1.9cm) and 1" (2.54cm) conduit knockouts; **sides** - three combination 1-1/2" (3.8cm), 2" (5.08cm) and three combination 1/2" (1.3cm), 3/4" (1.9cm) and 1" (2.54cm) conduit knockouts.

Four mounting holes shall be provided for attaching cabinet to wall. The cabinet shall be constructed of #14AWG C.R.S. with a zinc chromate finish. The dimensions shall be: door - 24" (61cm)W x 36" (91.44cm)H, cabinet - 24" (61cm)W x 36" (91.44cm)H x 6" (15.24cm)D.

A47445W SINGLE EQUIPMENT CABINET

The A47445W surface-mounted single equipment cabinet shall be provided with a vented hinged door. A flush catch and ring handle shall be provided on the door to prevent snagging. To facilitate ease of installation, four weldnuts shall be provided for installing one equipment panel or auxiliary panel.

For complete flexibility of conduit entrance into cabinet, the following shall be provided: **top and bottom** - four combination 1-1/2" (3.8cm), 2" (5.08cm) and three combination 1/2" (1.3cm), 3/4" (1.9cm) and 1" (2.54cm) conduit knockouts; **sides** - three combination 1-1/2" (3.8cm), 2" (5.08cm) and three combination 1/2" (1.3cm), 3/4" (1.9cm) and 1" (2.54cm) conduit knockouts.

Four mounting holes shall be provided for attaching cabinet to wall. The rust-resistant backbox shall be constructed of #14AWG galvanized metal. The door and flange shall be constructed of #14AWG C.R.S. and shall have a zinc chromate finish. The dimensions shall be: **faceplate** - including door and 2" (5.08cm) flange, 26" (66cm)W x 38" (96.52cm)H; **backbox** - 24" (61cm)W x 36" (91.44cm)H x 6" (15.24cm)D.

Model 36400-1 Model 36470-1 - Receptacle

NURSE CONTROL STATION CARE/COM II-E

° EASY TO READ, BACKLIT, LCD DISPLAY

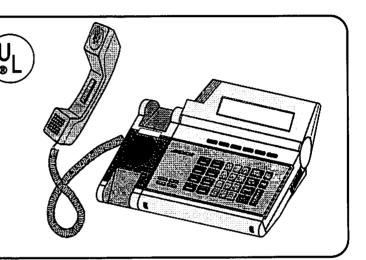
DISPLAYS UP TO THREE INCOMING CALLS

° FUNCTION MENU ACTIVATED BY SOFT KEYS

° CALLS ANNOUNCED BY DISTINCT RATE SIGNALS

° PUSH-TO-TALK HANDSET

° (8) PROGRAMMABLE FUNCTION KEYS



DESCRIPTION

Microprocessor controlled desk type nurse control station (NCS) with audio-visual call registration. Activities include call processing with up to three incoming calls displayed according to a three-level priority structure. Tone signaling continues until the call is answered or canceled. Additional tones include call reminder, call announce, and busy tone. Push-to-talk handset allows for privacy.

DISPLAY

4 x 40, backlit, LCD display provides incoming calls with room number, bed number, and call level, as well as time and date information. System features are accessed using soft key function menu.

COMMUNICATIONS PROVISIONS

The speaker provides audio for both call signaling and handsfree (NCS to NCS) communication. The microphone, separate from the speaker for maximum clarity, is used for voice pickup during push-to-talk and handset communications.

CONTROLS AND INDICATORS

12-key numeric keypad, (8) programmable keys, (6) soft keys, SCROLL and VOLUME keys, feature keys including: TALK, TONE MUTE, HOLD, RELEASE, and ANSWER key.

CALL REGISTRATION

Patient calls are shown on the *Incoming Call Display/Function Menu*. Each call is clearly identified by room number, bed number (if applicable), and call level. The call levels (according to priority) are: Code Blue, Emergency, and Routine Patient Call. Call level nomenclature is programmable in system programming.

SPEAKER/MICROPHONE

Speaker - Dynamic 3" (7.62 cm), with Alnico magnet; voice coil impedance is 45 ohms; power rating 5 watt. **Microphone -** Electret 3.9" (9.91 cm) wire microphone.

RECEPTACLE

The nurse control station requires a specially designed receptacle, Model 36470-1.

HOUSING, FINISH, AND DIMENSIONS

High-impact, molded thermoplastic housing finished in grey. Maximum dimensions of a nurse control station are: 14-1/4" (36.20 cm) wide x 4-3/4" (12.07 cm) high x 9" (22.86 cm) (with display upright) or 8" (20.32 cm) (with display extended horizontally) deep.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS NURSE CONTROL STATION

The microprocessor controlled desk type nurse control station shall provide both audible and visual call indication. Activities of the NCS include call processing with up to three incoming calls displayed according to a three-level priority structure. Tone signaling for a call shall continue until the call is either answered or canceled. Additional tones include call reminder, call announce, and a busy tone. Call tones shall be adjustable on the NCS by the user. The user shall be able to communicate either handsfree NCS to NCS communication, or using the push-to-talk handset for privacy.

A 4 x 40 backlit, LCD, display is provided to display incoming calls according to room number, bed number, and call level, as well as time and date information. The multi-layer Function Menu provides system features, accessed using the soft keys.

The speaker shall provide audio for call signaling, as well as handsfree communication. The microphone, separate from the speaker for maximum clarity, is used for voice pickup during push-to-talk and handset communications. The push-to-talk handset provides the attendant with privacy during conversations.

The nurse control station shall feature a 12-key numeric keypad, (8) programmable keys, (6) soft keys which coincide with the Function Menu, SCROLL and VOLUME keys, as well as the feature keys, which include: TALK, TONE MUTE, HOLD, RELEASE, and ANSWER key.

Up to three patient calls are identified on the *Incoming Call Display/Function Menu*. Each call shall be clearly identified by room number, bed number (if applicable), and call level. The default call levels, according to priority, are Code Blue, Emergency, and Routine Patient Call. Call level nomenclature can be selected by a System Administrator and programmed in the system programming.

The speaker shall be a dynamic 3" (7.62 cm) cone type with Alnico V magnet. The impedance of the speaker's voice coil shall be 45 ohms. The separate microphone shall be 3.9" (9.91 cm) electret type.

The housing shall be made of high-impact molded thermoplastic finish in grey. The dimensions of the nurse control station shall be 14-¼" (36.20 cm) wide x 4-¾" (12.07 cm) high x 9" (22.86 cm) (with display upright) or 8" (20.32 cm) (with display extended horizontally) deep.

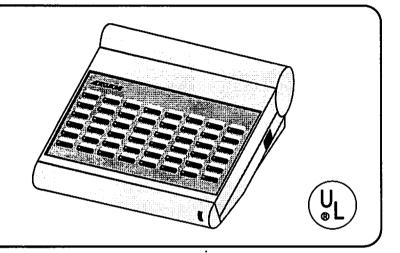
Model 36500-1

DIRECT STATION SELECTION CONSOLE CARE/COM II-E

° 48 PROGRAMMABLE KEYS

° 48 LED INDICATORS

° FLASH RATE OF LED INDICATES CALL LEVEL



DESCRIPTION

The 48 programmable keys and indicators of the DSS console shall work in conjunction with the nurse control station to provide efficient call processing and enhance the system communication. Althought the DSS is a stand-alone device, it must be "attached" to a NCS, where each call will be indicated on the *Incoming Call Display/Function Menu*.

SIGNAL INDICATIONS

The DSS shall provide for LED signals as follows:

- 1. Steady Interrupted at 6 pulses per minute (PPM) indicating a level 5 call.
- 2. Slow Flash Interrupted at 60 pulses per minute (PPM) indicating a level 4 call.
- 3. Fast Flash Interrupted at 120 pulses per minute (PPM) indicating a priority level 1 call.

A LED on steady, not interrupted, indicates a connected audio path.

A flickering LED indicates the call associated with that key has been placed on hold.

PROGRAMMING

Each of the 48 keys are easily programmed in the system programming using a key code and a sub-key code. These codes provide the DSS key with the ability to perform any sequence of the following options:

Page all NCSs
Page a specific zone
Page a specific page group
Perform an external page to a specific zone
Monitor a specific zone
Monitor a specific page group
Dial a NCS
Call a NCS direct
Perform an off-duty transfer, dialing a NCS
Perform an off-duty transfer, calling a NCS direct

DESK MOUNTING

For desk mounting, the direct station selection console plugs into a standard station connecting block.

HOUSING, FINISH, AND DIMENSIONS

High-impact, molded thermoplastic housing finished in grey. An overlay shall allow the user to customize each key, and view the nomenclature applied to the key. Maximum dimensions of a DSS console are: 9-1/4" (23.5 cm) wide x 2-1/4" (6.99 cm) high x 7-1/4" (18.42 cm) deep.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS DIRECT STATION SELECTION CONSOLE

The 48 programmable keys and indicators of the DSS console shall work in conjunction with the nurse control station to provide efficient call processing and enhance the system communication. Although the DSS is recognized as a stand-alone device which occupies its own port, it must be attached to a NCS in system programming, allowing each call to register on the *Incoming Call Display/Function Menu*.

The DSS shall provide LED signals according to the following structure:

Steady - Interrupted at 6 pulses per minute (PPM) indicating a level 5 call.

Slow Flash - Interrupted at 60 pulses per minute (PPM) indicating a level 4 call.

Fast Flash - Interrupted at 120 pulses per minute (PPM) indicating a priority level 1 call.

A LED on steady, not interrupted, indicates a connected audio path. A flickering LED indicates the call associated with that key has been placed on hold.

Each of the 48 keys are easily programmed in the system using a key code and a sub-key code. These codes provide the DSS key with the ability to perform any sequence of the following options:

Page all NCSs
Page a specific zone
Page a specific page group
Perform an external page to a specific zone
Monitor a specific zone
Monitor a specific page group
Dial a NCS
Dial a NCS direct
Perform an off-duty transfer, dialing a NCS
Perform an off-duty transfer, calling a NCS direct

For easy desk mounting, the DSS console plugs into a standard station connecting block.

The housing shall be made of high-impact molded thermoplastic finish in grey. An overlay shall allow the user to customize each key, and view the nomenclature applied to the key. The dimensions of the DSS console shall be $9-\frac{1}{4}$ " (23.5 cm) wide x $2-\frac{3}{4}$ " (6.99 cm) high x $7-\frac{1}{4}$ " (18.42 cm) deep.

Model CCP1S/W43

SINGLE PATIENT STATION CARE/COM II CARE/COM II-E

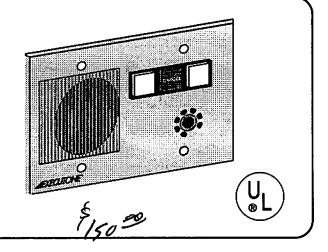
° CORDSET REMOVAL TRIGGERS PATIENT CALL

° ENTERTAINMENT AUDIO MUTING DURING INTERCOM

° NON-CONDUCTIVE MOUNTING SCREWS

° CONNECTIONS VIA PREWIRED CONNECTORS

° EXCELLENT VOICE PICKUP SENSITIVITY



DESCRIPTION

Wall recessed or surface mounted single patient station for use with call origination device or patient control unit to provide two-way voice communication with the nurse control station. Removal of call origination device or patient control unit originates a staff-assist call or normal call (switch selectable for Care/Com II), or an emergency or normal call (switch selectable for CARE/COM II-E), cancelable only at patient station. Incorporates protection from electromagnetic interference to minimize service disruption.

RECEPTACLE

Multi-purpose cordset receptacle fully wired to accept any of the following cordsets interchangeably on a plug-in basis:

- O Model PCU-3 Three-Button Patient Control Unit
- Standard single-prong combination cordset with nurse call origination facility (not used for sideguard capability).

CONTROLS AND INDICATORS

One combination red intercom indicator and CANCEL button and one white call placement indicator.

INTERFACE TO PERIPHERAL DEVICES

CARE/COM II-E provides inputs to accept the following peripheral devices:

- O Code Blue Station
- O Emergency Station

CIRCUITRY

Solid state switching with high reliability relays for audio and staff-assist switching.

SPEAKER/MICROPHONE

Dynamic 2-1/4" (5.72 cm) cone type with Alnico V magnet and voice coil impedance of 45 ohms.

OPTIONAL BACKBOX ADAPTER KIT

The patient station can be wall mounted into existing recessed W1, W2, or W330 type backbox by using a semi-flush faceplate adaper kit, Model AA38574-OW.

HOUSING AND FINISH

Faceplate: High-impact, molded thermoplastic finish in off-white color, supplied with nylon screws for mounting.

S43 Housing: Three-gang backbox for surface mounting.

DIMENSIONS

Faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm) high

S43 Housing: 6-1/2" (16.51 cm) wide x 4-1/4" (12.07 cm) high x 2-1/4" (6.99 cm) deep

BACKBOX

8-13/16" (22.38 cm) wide x 4-1/2 (11.43 cm) high, electrical box with three-gang adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS SINGLE PATIENT STATION

The wall recessed or surface mounted single patient station shall be used with call origination device or patient control unit and shall provide two-way voice communication with the nurse control station. Operates in conjunction with auxiliary signaling equipment. Facilities for TV and radio control shall be provided.

A fully wired multi-purpose receptacle shall be provided to accept single prong type cordset or patient control unit. A staff-assist call or normal call (switch selectable for Care/Com II) or an emergency or normal call (switch selectable for CARE/COM II-E), shall be originated if the patient control unit or call origination device is removed from the receptacle, and shall be cancelable only at the patient station.

The patient station shall be provided with a combination red intercom indicator and CANCEL button and one white call placement indicator. The red indicator shall be illuminated when intercom line from the NCS to the station unit is engaged.

In CARE/COM II-E, the patient station shall have the ability to interface with both a code blue station and emergency station for maximum coverage.

To minimize the possibility of service disruption, each station shall incorporate protection from electromagnetic interference, both electro-static discharge and radio frequency interference (EMI, ESD, and RFI).

To insure long life and reliability, solid state circuitry shall be used for signal switching and switch contacts shall be crossbar palladium.

The speaker/microphone shall be a dynamic 2-1/4" (5.72 cm) cone type with Alnico V magnet. The impedance of the speaker/microphone's voice coil shall be 45 ohms.

For ease of installation and maintenance, the patient station shall plug into prewired edge connectors. All components shall be mounted on a faceplate. For maximum safety against electrical shock, the faceplate shall be fastened to the backbox with nylon screws (furnished with the station unit).

Wall mounting of patient station into existing recessed W1, W2 or W330 type backbox shall be possible using a semi-flush faceplate adapter kit, Model AA38574-OW.

The faceplate shall be made of high impact, molded thermoplastic finish, in off-white color. The S43 housing shall be a three-gang backbox for surface mounting. The dimensions shall be:

Faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm) high.

Housing: 6-1/2" (16.51 cm) wide x 4-3/4" (12.07 cm) high x 2-3/4" (6.99 cm) deep.

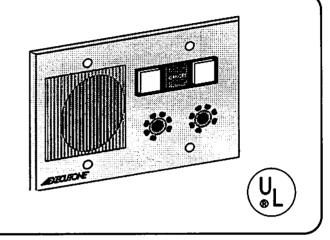
Backbox: 8-13/16" (22.38 cm) wide x 4-1/2" (11.43 cm) high, electrical box with three-gang

adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

Model CCP2S/W43

DUAL PATIENT STATION CARE/COM II CARE/COM II-E

- ° CORDSET REMOVAL TRIGGERS PATIENT CALL
- * ENTERTAINMENT AUDIO MUTING DURING INTERCOM
- ONON-CONDUCTIVE MOUNTING SCREWS
- ° CONNECTIONS VIA PREWIRED CONNECTORS
- ° EXCELLENT VOICE PICKUP SENSITIVITY



DESCRIPTION

Wall recessed or surface mounted dual patient station for use with call origination device or patient control unit to provide two-way voice communication with the nurse control station. Removal of call origination device or patient control unit originates staff-assist call or normal call (switch selectable for Care/Com II), or an emergency or normal call (switch selectable for CARE/COM II-E), cancelable only at patient station. Incorporates protection from electromagnetic interference to minimize service disruption.

RECEPTACLE

Two multi-purpose cordset receptacles fully wired to accept any of the following cordsets interchangeably on a plug-in basis:

- O Model PCU-3 Three-Button Patient Control Unit
- Standard single-prong combination cordset with nurse call origination facility (not used for sideguard capability).

CONTROLS AND INDICATORS

One combination red intercom indicator and CANCEL button and two white call placement indicators.

INTERFACE TO PERIPHERAL DEVICES

CARE/COM II-E provides inputs to accept the following peripheral devices:

- O Code Blue Station
- O Emergency Station

CIRCUITRY

Solid state switching with high reliability relays for audio and staff-assist switching.

SPEAKER/MICROPHONE

Dynamic 2-1/4" (5.72 cm) cone type with Alnico V magnet and voice coil impedance of 45 ohms.

OPTIONAL BACKBOX ADAPTER KIT

The patient station can be wall mounted into existing recessed W1, W2, or W330 type backbox by using a semi-flush faceplate adaper kit, Model AA38574-OW.

HOUSING AND FINISH

Faceplate: High-impact, molded thermoplastic finish in off-white color, supplied with nylon screws for mounting.

S43 Housing: Three-gang backbox for surface mounting.

DIMENSIONS

Faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm) high

S43 Housing: 6-1/2" (16.51 cm) wide x 4-3/4" (12.07 cm) high x 2-3/4" (6.99 cm) deep

BACKBOX

8-13/16" (22.38 cm) wide x 4-1/2 (11.43 cm) high, electrical box with three-gang adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

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ARCHITECTS' AND ENGINEERS' SPECIFICATIONS DUAL PATIENT STATION

The wall recessed or surface mounted dual patient station shall be used with two call origination device(s) or patient control unit(s) and shall provide two-way voice communication with the nurse control station. Operates in conjunction with auxiliary signaling equipment. Facilities for TV and radio control shall be provided.

Two fully and independently wired multi-purpose receptacles shall be provided, each to accept single prong type cordset or patient control unit. A staff-assist call or normal call (switch selectable for Care/Com II), or an emergency or normal call (switch selectable for CARE/COM II-E) shall be originated if the patient control unit or call origination device is removed from the receptacle, and shall be cancelable only at the patient station.

The patient station shall be provided with a combination red intercom indicator and CANCEL button and two white call placement indicators. The red indicator shall be illuminated when intercom line from the NCS to the station unit is engaged.

In CARE/COM II-E, the patient station shall have the ability to interface with both a code blue station and emergency station for maximum coverage.

To minimize the possibility of service disruption, each station shall incorporate protection from electromagnetic interference, both electro-static discharge and radio frequency interference (EMI, ESD, and RFI).

To insure long life and reliability, solid state circuitry shall be used for signal switching and switch contacts shall be crossbar palladium. Entertainment audio shall be automatically muted during intercom.

The speaker/microphone shall be a dynamic 2-1/4" (5.72 cm) cone type with Alnico V magnet. The impedance of the speaker/microphone's voice coil shall be 45 ohms.

For ease of installation and maintenance, the patient station shall plug into prewired edge connectors. All components shall be mounted on a faceplate designed to fit in the opening of a standard three-gang backbox. For maximum safety against electrical shock, the faceplate shall be fastened to the backbox with nylon screws (furnished with the station unit).

Wall mounting of patient station into existing recessed W1, W2, or W330 type backbox shall be possible using a semi-flush faceplate adapter kit, Model AA38574-OW.

The faceplate shall be made of high impact, molded ABS finish, in off-white color. The S43 housing shall be a three-gang backbox for surface mounting. The dimensions shall be:

Faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm) high

Housing: 6-1/2" (16.51 cm) wide x 4-3/4" (12.07 cm) high x 2-3/4" (6.99 cm) deep

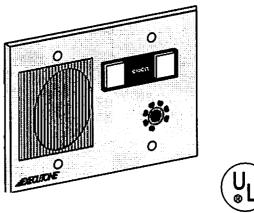
Backbox: 8-13/16" (22.38 cm) x 4-1/2" (11.43 cm) high, electrical box with three-gang

adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

Model CCPCS/W43

SINGLE PATIENT SIDEGUARD **STATION CARE/COM II** CARE/COM II-E

- BED REMOVAL TRIGGERS PATIENT CALL
- ° STANDARD STATION OPERATION WITHOUT BED
- ° ENTERTAINMENT AUDIO MUTING DURING INTERCOM
- NON-CONDUCTIVE MOUNTING SCREWS
- CONNECTIONS VIA PREWIRED CONNECTORS
- EXCELLENT VOICE PICKUP SENSITIVITY





DESCRIPTION

Wall recessed or surface mounted single patient sideguard station, for use with bed equipped for sideguard communication, call origination device, or patient control unit to provide two-way voice communication with the nurse control station. Removal of bed or cordset from receptacle originates a patient call cancelable only at patient station. Incorporates protection from electromagnetic interference to minimize possibility of service disruption.

RECEPTACLE

Multi-purpose cordset receptacle fully wired to accept any of the following cordsets interchangeably on a plug-in basis:

- O Model PCU-3 Three-Button Patient Control Unit
- O Standard single-prong combination cordset with nurse call origination facility (not used for sideguard capability).

CONTROLS AND INDICATORS

One combination red intercom indicator and CANCEL button and one white call placement indicator.

INTERFACE TO PERIPHERAL DEVICES

CARE/COM II-E provides inputs to accept the following peripheral devices:

- O Code Blue Station
- O Emergency Station

CIRCUITRY

Solid state switching with crossbar palladium switch contacts.

SPEAKER/MICROPHONE

Dynamic 2-1/4" (5.72 cm) cone type with Alnico V magnet and voice coil impedance of 45 ohms.

OPTIONAL BACKBOX ADAPTER KIT

The patient station can be wall mounted into existing recessed W1, W2, or W330 type backbox by using a semi-flush faceplate adaper kit, Model AA38574-OW.

HOUSING AND FINISH

Faceplate: High-impact, molded thermoplastic finish in off-white color, supplied with nylon screws for mounting.

S43 Housing: Three-gang backbox for surface mount-

DIMENSIONS

Faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm)

S43 Housing: 6-1/2" (16.51 cm) wide x 4-3/4" (12.07 cm) high x 2-34" (6.99 cm) deep

BACKBOX

8-13/16" (22.38 cm) wide x 4-1/2 (11.43 cm) high, electrical box with three-gang adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS SINGLE PATIENT SIDEGUARD STATION

The wall recessed or surface mounted single patient sideguard station shall be used with a bed equipped for sideguard communications, call origination device, or patient control unit to provide two-way voice communication with the nurse control station. Operates in conjunction with auxiliary signaling equipment.

The patient station shall be connected to the bed's communication control module through a receptacle assembly kit and interconnecting cable which shall be provided with the bed. Additionally, a fully wired multi-purpose cordset receptacle shall provide plug-in facility for cordset or patient control unit. An automatic patient call shall be originated if interconnecting cable is removed from the bed receptacle or if the patient control unit or cordset is removed from the cordset receptacle.

The patient station shall be provided with a combination red intercom indicator and CANCEL button and one white call placement indicator. The red indicator shall be illuminated when intercom line from the NCS to the station unit is engaged.

In CARE/COM II-E, the patient station shall have the ability to interface with both a code blue station and emergency station for maximum coverage.

To minimize the possibility of service disruption, each station shall incorporate protection from electromagnetic interference, both electro-static discharge and radio frequency interference (EMI, ESD, and RFI).

To insure long life and reliability, solid state circuitry shall be used for signal switching and switch contacts shall be crossbar palladium.

The speaker/microphone shall be a dynamic 2-1/4" (5.72 cm) cone type with Alnico V magnet. The impedance of the speaker/microphone's voice coil shall be 45 ohms.

For ease of installation and maintenance, the patient station shall plug into prewired edge connectors. All components shall be mounted on a faceplate designed to fit in the opening of a standard three-gang backbox. For maximum safety against electrical shock, the faceplate shall be fastened to the backbox with nylon screws (furnished with the station unit).

Wall mounting of patient station into existing recessed W1, W2, or W330 type backbox shall be possible using a semi-flush faceplate adapter kit, Model AA38574-OW.

The faceplate shall be made of high impact, molded ABS finish, in off-white color. The S43 housing shall be a three-gang backbox for surface mounting. The dimensions shall be:

Faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm) high.

Housing: 6-1/2" (16.51 cm) wide x 4-1/4" (12.07 cm) high x 2-3/4" (6.99 cm) deep.

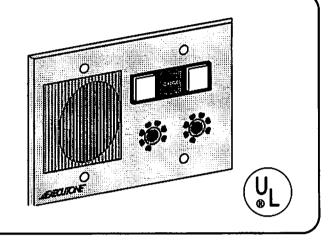
Backbox: 8-13/16" (22.38 cm) wide x 4-1/2" (11.43 cm) high, electrical box with three-gang

adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

Model 3080215

DUAL PATIENT SIDEGUARD STATION CARE/COM II CARE/COM II-E

- BED REMOVAL TRIGGERS PATIENT CALL
- ° STANDARD STATION OPERATION WITHOUT BED(S)
- ° INDIVIDUAL BED ACCESS AND ANNUNCIATION
- ° ENTERTAINMENT AUDIO MUTING DURING INTERCOM
- ° NON-CONDUCTIVE MOUNTING SCREWS
- CONNECTIONS VIA PREWIRED CONNECTORS
- ° EXCELLENT VOICE PICKUP SENSITIVITY



DESCRIPTION

Wall recessed or surface mounted dual patient sideguard station for use with two beds equipped for sideguard communication, call origination devices, or patient control units to provide two-way voice communication with the nurse control station. Removal of cordset from receptacle originates a patient call cancelable only at patient station. Incorporates protection from electromagnetic interference to minimize possibility of service disruption.

RECEPTACLE

Two multi-purpose cordset receptacles fully wired to accept any combination of the following cordsets interchangeably on a plug-in basis:

- O Model PCU-3 Three-Button Patient Control Unit
- Standard single-prong combination cordset with nurse call origination facility (not used for sideguard capability).

CONTROLS AND INDICATORS

One combination red intercom indicator and CANCEL button and two white call placement indicators.

INTERFACE TO PERIPHERAL DEVICES

CARE/COM II-E provides inputs to accept the following peripheral devices:

- O Code Blue Station
- O Emergency Station

CIRCUITRY

Solid state switching with crossbar palladium switch contacts and reed relays for audio and staff-assist switching.

SPEAKER/MICROPHONE

Dynamic 2-1/4" (5.72 cm) cone type with Alnico V magnet and voice coil impedance of 45 ohms.

OPTIONAL BACKBOX ADAPTER KIT

The patient station can be wall mounted into existing recessed W1, W2, or W330 type backbox by using a semi-flush faceplate adaper kit, Model AA38574-OW.

HOUSING AND FINISH

Faceplate: High-impact, molded thermoplastic finish in off-white color, supplied with nylon screws for mounting.

S43 Housing: Three-gang backbox for surface mounting.

DIMENSIONS

Faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm) high

S43 Housing: 6-1/2" (16.51 cm) wide x 4-1/4" (12.07 cm) high x 2-1/4" (6.99 cm) deep

BACKBOX

8-13/16" (22.38 cm) wide x 4-1/2 (11.43 cm) high, electrical box with three-gang adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS DUAL PATIENT SIDEGUARD STATION

The wall recessed or surface mounted dual patient sideguard station shall be used with two beds equipped for sideguard communication, call origination devices, or patient control units to provide two-way voice communication with the nurse control station.

The patient station shall be connected to each bed's communication control module through receptacle assembly kits and interconnecting cables which shall be provided with each bed. Additionally, two fully wired multi-purpose cordset receptacles shall provide plug-in facilities for cordsets or patient control units. An automatic patient call shall be originated if interconnecting cables are removed from the bed receptacles or if the patient control units or cordsets are removed from the cordset receptacles.

The patient station shall be provided with a combination red intercom indicator CANCEL button and two white call placement indicators. The red indicator shall be illuminated when intercom line from the NCS to the station unit is engaged.

In CARE/COM II-E, the patient station shall have the ability to interface with both a code blue station and emergency station for maximum coverage.

To minimize the possibility of service disruption, each station shall incorporate protection from electromagnetic interference, both electro-static discharge and radio frequency interference (EMI, ESD, and RFI).

To insure long life and reliability, solid state circuitry shall be used for signal switching and switch contacts shall be crossbar palladium.

The speaker/microphone shall be a dynamic 2-1/4" (5.72 cm) cone type with Alnico V magnet. The impedance of the speaker/microphone's voice coil shall be 45 ohms.

For ease of installation and maintenance, the patient station shall plug into prewired edge connectors. All components shall be mounted on a faceplate. For maximum safety against electrical shock, the faceplate shall be fastened to the backbox with nylon screws (furnished with the station unit).

Wall mounting of patient station into existing recessed W1, W2 or W330 type backbox shall be possible using a semi-flush faceplate adapter kit, Model AA38574-OW.

The faceplate shall be made of high impact, molded thermoplastic finish, in off-white color. The S43 housing shall be a three-gang backbox for surface mounting. The dimensions shall be:

Faceplate: 6-3/8" (16.19 cm) wide x $4-\frac{1}{2}$ " (11.43 cm) high.

Housing: 6-1/2" (16.51 cm) wide x 4-1/4" (12.07 cm) high x 2-1/4" (6.99 cm) deep.

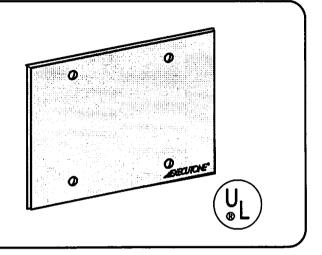
Backbox: 8-13/16" (22.38 cm) wide x 4-1/2" (11.43 cm) high, electrical box with three-gang

adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

Model EX-ZCM3

ZONE CONTROL MODULE

- ° CONTROLS ZONE DOME LIGHT
- ° RESPONDS TO ALL PATIENT CALLS IN ZONE
- ° RESPONDS TO ALL EMERGENCY CALLS IN ZONE
- ° RESPONDS TO ALL CODE BLUE CALLS IN ZONE
- ° SOLID STATE CIRCUITRY
- ° MOUNTS ON STANDARD TWO-GANG BACKBOX



DESCRIPTION

Surface or flush mounted zone control module for use in conjunction with zone lamp. Used in locations where the nurse control station and dome lamps are not visible to alert the nursing personnel of calls placed by patients. Patient calls are processed according to a three-level call structure.

REQUIREMENTS

One zone control module and one zone lamp can be connected for each zone in the system, to provide visual signaling of code blue, emergency, and patient calls.

CIRCUITRY

Solid state devices mounted on an epoxy glass printed circuit board.

HOOKUP

Miniature plug-in terminal blocks with screw terminals and barriers.

HOUSING AND FINISH

Faceplate: High-impact, molded thermoplastic finish. S42 Housing: Two-gang electrical box.

DIMENSIONS

Faceplate: 4-9/16" (11.59 cm) wide x 4-1/2" (11.43 cm) high.

S42 Housing: 4-¾" (12.07 cm) wide x 4-¾" (12.07 cm) high x 2-¾" (6.99 cm) deep.

W42 Backbox: 4-11/16" (11.91 cm) wide x 4-11/16" (11.91 cm) high, electrical box with two-gang adapter for total depth of 2-7/8" (7.30 cm), supplied by others.

ZONE CONTROL MODULE

The wall recessed or surface mounted zone control module shall be used in conjunction with zone lamp in locations where the nurse control station and specific dome lamps are not visible to alert nursing personnel of calls placed by patients. Patient calls are processed according to a three-level call structure.

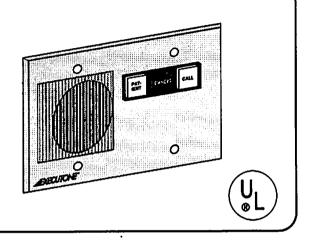
One Model EX-ZCM3 Zone Control Module and one zone lamp can be connected for each zone in the system. Provides visual signaling for code blue, emergency, and patient calls in the zone. For reliability, solid state devices and epoxy glass printed circuit board shall be used. For ease of installation and maintenance, miniature plug-in terminal blocks and screw terminals and barriers shall be provided.

The zone control module faceplate shall be made of high impact, molded thermoplastic. The dimensions shall be: faceplate: 4-9/16" (11.59 cm) wide x 4-½" (11.43 cm) high. S42 housing: 4-¾" (12.07 cm) wide x 4-¾" (12.07 cm) high x 2-¾" (6.99 cm) deep. W42 backbox: 4-11/16" (11.91 cm) wide x 4-11/16" (11.91 cm) high, electrical box with two-gang adapter for total depth of 2-7/8" (7.30 cm), supplied by others.

Model CCDSS/W43

DUTY/STAFF STATION CARE/COM II CARE/COM II-E

- ° FUNCTION SWITCH SELECTABLE
- VISUAL AND AUDIBLE INDICATION OF CALLS
- ° REPEATED TONE SIGNAL FOR EMERGENCY CALLS
- NON-CONDUCTIVE MOUNTING SCREWS
- ° CONNECTIONS VIA PREWIRED CONNECTORS
- ° EXCELLENT VOICE PICKUP SENSITIVITY



DESCRIPTION

Wall recessed or surface mounted duty/staff station with call origination facility and two-way voice communication between utility area and nurse control station. Provides visual and audio indication of normal, emergency, and code blue calls in system when duty mode is selected. Mode of operation is switch selectable. When set in staff mode, the station has communication with the NCS but does not receive indication of patient calls. Incorporates protection from electromagnetic interference to minimize service disruption.

CONTROLS AND INDICATORS

One nurse CALL button and indicator, one combination red intercom indicator and CANCEL button, one PATIENT call indicator. Tone signals announce incoming calls. Repeating tone signals announce unanswered calls. Interrupted tone signals indicate emergency calls.

INTERFACE TO PERIPHERAL DEVICES

CARE/COM II-E provides inputs to accept the following peripheral devices:

- O Code Blue Station
- O Emergency Station

CIRCUITRY

Solid state switching with high reliability relays for audio switching.

SPEAKER/MICROPHONE

Dynamic 2-1/4" (5.72 cm) cone type with Alnico V magnet and voice coil impedance of 45 ohms.

OPTIONAL BACKBOX ADAPTER KIT

The duty/staff station can be wall mounted into existing recessed W1, W2, or W330 type backbox by using a semi-flush faceplate adaper kit, Model AA38574-OW.

HOUSING AND FINISH

Faceplate: High-impact, molded thermoplastic finish in off-white color, supplied with nylon screws for mounting.

S43 Housing: Three-gang backbox for surface mounting.

DIMENSIONS

Faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm) high

S43 Housing: 6-1/2" (16.51 cm) wide x 4-1/4" (12.07 cm) high x 2-1/4" (6.99 cm) deep

BACKBOX

8-13/16" (22.38 cm) wide x 4-1/2 (11.43 cm) high, electrical box with three-gang adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS DUTY/STAFF STATION

The wall recessed or surface mounted duty/staff station shall contain the facility for call origination to the nurse control station and shall automatically indicate all normal patient, emergency, and code blue calls when in the duty mode. The station shall provide two-way voice communication with the nurse control station. The mode of operation shall be switch selectable. When set in staff mode, the station has communication with the NCS but does not receive indication of patient calls. Operates in conjunction with auxiliary signaling equipment.

One PATIENT call indicator lamp shall be provided to indicate patient calls when the station is set for duty mode (steady light shall indicate normal calls and flashing light shall indicate emergency calls). One white combination CALL button and indicator shall be provided to originate a call to the nurse control station. One combination red intercom indicator and CANCEL button shall be provided to cancel calls to the NCS. The red indicator shall be illuminated when intercom line from the NCS to the duty/staff station is engaged. Tone signals shall announce incoming calls. Repeating tone signals shall announce unanswered calls. Interrupted tone signals shall indicate emergency calls.

In CARE/COM II-E, the duty/staff station shall have the ability to interface with both a code blue station and emergency station for maximum coverage.

To minimize the possibility of service disruption, each station shall incorporate protection from electromagnetic interference, both electro-static discharge and radio frequency interference (EMI, ESD, and RFI).

To insure long life and reliability, solid state circuitry shall be used for signal switching and switch contacts shall be crossbar palladium.

The speaker/microphone shall be a dynamic 2-1/4" (5.72 cm) cone type with Alnico V magnet. The impedance of the speaker/microphone's voice coil shall be 45 ohms.

For ease of installation and maintenance, the duty/staff station shall plug into prewired edge connectors. All components shall be mounted on a faceplate. For maximum safety against electrical shock, the faceplate shall be fastened to the backbox with nylon screws (furnished with the station unit).

Wall mounting of duty/staff station into existing recessed W1, W2, or W330 type backbox shall be possible using a semi-flush faceplate adapter kit, Model AA38574-OW.

The faceplate shall be made of high impact, molded thermoplastic finish, in off-white color. The S43 housing shall be a three-gang backbox for surface mounting. The dimensions shall be:

Faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm) high

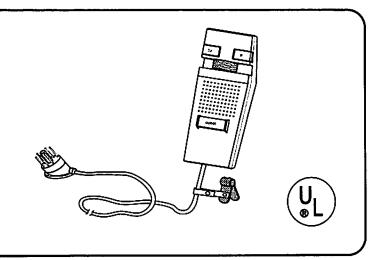
Housing: 6-1/2" (16.51 cm) wide x 4-3/4" (12.07 cm) high x 2-3/4" (6.99 cm) deep Backbox: 8-13/16" (22.38 cm) x 4-1/2" (11.43 cm) high, electrical box with three-gang

adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

PATIENT CONTROL UNIT

Model PCU-3, -15 Model PCU-3IC, -15

- ° PROVIDES NURSE CALL ORIGINATION
- ° DISTINCT PUSH-TYPE NURSE CALL BUTTON
- ° SELECTION OF RADIO AND TV
- ° VOLUME CONTROL FOR SELECTED PROGRAM
- ° RUGGED, HIGH IMPACT, MOLDED HOUSING



DESCRIPTION

Model PCU-3 Patient Control Unit is used with standard patient stations. Model PCU-3IC is used with patient stations featuring two-way communication via patient control unit. In addition, the patient can individually select, adjust, and listen to, radio and TV programming.

OPERATING CONTROLS

Speaker Volume: Easily accessible wheel-type volume control allows the radio and TV volume to be controlled by the patient. Resetting the volume does not affect level of voice during two-way communication.

NURSE Call Button: Push-type rectangular button, noticeably larger than the other buttons, conveniently located for ease of use and quick identification, especially in the dark.

Feature Buttons: R and TV button used for on/off and program selection of radio and TV.

SPEAKER

2" (5.08 cm) diameter, dynamic type, with 0.35 oz. (9.82 gm) Alnico V magnet. Voice coil impedance: 40 ohms. Power handling capability: 0.2 watt. Resonant frequency: 430 Hz \pm 60 Hz.

UNIT STERILIZATION CAPABILITY

Withstands ethylene oxide sterilization procedures.

PLUG

And the second of the second

Special 8-contact, high-impact, polarized type, molded onto one end of cord.

CORD

8' (2.44 m) or 15' (4.58 m); contains stranded, twisted vinyl insulated conductors. Polyvinylchloride (PVC) outer jacket; outside diameter 0.284" (7.21 mm) maximum.

BED CLAMP

Stainless steel bed clamp with mylar strap permanently attached to cord.

HOUSING

High-impact, molded thermoplastic housing.

DIMENSIONS

Maximum dimensions are: 2-1/4" (5.72 cm) wide x 7-1/8" (18.1 cm) high x 1-1/2" (3.81) deep.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS PATIENT CONTROL UNIT

Models PCU-3, -15 and PCU-3IC, -15 Patient Control Units shall contain facilities for nurse call origination and remote control of radio and TV programming. The PCU-3IC, -15 Patient Control Unit shall be designed for patient stations featuring two-way communication via patient control unit. The PCU-3, -15 Patient Control Unit shall be used with standard patient stations.

The NURSE call button shall be a push-type rectangular button, noticeably larger than the other buttons for ease of use and quick identification, even in a darkened room. The patient control unit shall be equipped with two feature buttons for radio and TV on/off and program selection.

The speaker shall be a 2" (5.08 cm) diameter, dynamic type with a 0.35 ounce (9.91 gm) Alnico V magnet. The voice coil shall have an impedance of 40 ohms; the power handling capacity shall be 0.2 watt; the resonant frequency shall be 430 Hz ± 60 Hz. A wheel-type volume control shall be used to adjust the radio and TV volume. The volume control shall have no effect on the nurse call voice communication.

The polyvinylchloride (PVC) cord shall contain stranded, twisted vinyl insulated conductors. The maximum outside diameter of the cord shall be 0.284" (7.21 mm); overall cord length shall be 8' (2.44 m) or 15' (4.58 m). A polarized 8-contact, high-impact plug shall be molded into one end of the cord.

A stainless steel bed clamp with mylar strap shall be permanently attached to the cord. The bed clamp shall be movable for adjustment. Detachable type clamp which may be inadvertently misplaced or lost shall not be acceptable.

The housing shall be a high-impact, molded thermoplastic unit. The unit shall be capable of withstanding ethylene oxide sterilization procedures. Maximum dimensions of the housing shall be 2-1/4" (5.72 cm) wide x 7-1/8" (18.1 cm) high x 1-1/2" (3.81 cm) deep.

NOTE: The PCU-3 Patient Control Unit is NOT to be used by patients undergoing oxygen therapy.

Model M282

CALL ORIGINATION BUTTON

° PROVIDES NURSE CALL ORIGINATION

° FINGERTIP ACTUATES CALL

° ONE-PIECE CONSTRUCTION COMPACT DESIGN

° INSULATED AGAINST SHOCK HAZARD

° RED CALL BUTTON AND WHITE NOMENCLATURE

° RUGGED, HIGH IMPACT MOLDED HOUSING

° BRASS NICKEL PLATED PLUG





DESCRIPTION

Plug assembly with call origination button.

BUTTON

Momentary action type with spring return.

HOOKUP

Plugs into jack receptacle on patient station.

PLUG

Brass with nickel plating mounted on metal base.

HOUSING

Metal base and protective high impact molded housing.

FINISH

Housing: Black with white nomenclature.

Plug: Nickel plated.

Button: Red.

DIMENSIONS

Housing: 1" (2.54 cm) wide x 1-5/16" (3.33 cm) high x

5/8" (1.59 cm) deep.

Plug: 1-1/4" (3.18 cm) long.

CALL ORIGINATION BUTTON

The Model M282 plug assembly with call origination button shall be of the momentary action type with spring return.

The plug shall be constructed of nickel-plated brass and shall plug into the jack receptacle of standard patient stations.

The unit shall be supplied in a high impact molded housing. The finish shall be:

Housing: Black Button: Red Plug: Nickel

The maximum dimensions of the housing shall be 1" (2.54 cm) wide x 1-5/16" (3.33 cm) high x 5/8" (1.59 cm) deep. The maximum dimension of the plug shall be 1-1/4" (3.18 cm) deep.

Model M518X

CORDSET

° PROVIDES NURSE CALL ORIGINATION

° LIGHT PRESSURE ACTIVATES SWITCH

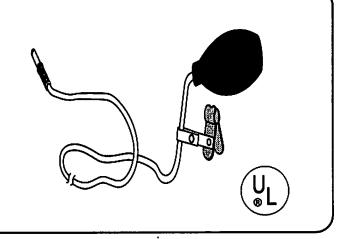
° ADJUSTABLE SECURITY CLAMP

° INSULATED AGAINST SHOCK HAZARD

° SUITABLE FOR USE IN OYGENT TENT

OPPENDABLE SWITCH ENCLOSED IN PLUG

° CORDSET EASILY STERILIZED



DESCRIPTION

Cordset for call origination. Suitable for general, oxygen tent, and geriatric applications.

SWITCH

Operated by air, momentary action type, built into plug.

SQUEEZE BULB

Light pressure on bulb by any part of the body activates switch. White washable neoprene.

HOOKUP

Plugs into jack receptacle on patient station.

UNIT STERILIZATION

Withstands ethylene oxide sterilization procedures.

PLUG

Stainless steel with insulated plated steel spring strain relief.

CORD

White washable polyvinyl chloride (PVC).

BED CLAMP

Stainless steel bed clamp with mylar strap permanently attached to cord.

DIMENSIONS

Overall length of cord: 6' (1.83 m).

Plug: 1-¼" (3.18 cm) long. Bulb: 2-¾" (6.99 cm) long.

CORDSET

The Model M518X cordset shall permit flexible and easy call origination and shall be suitable for general, oxygen tent, and geriatric applications.

The cordset shall be equipped with a white washable neoprene squeeze bulb. Any light pressure on the bulb by any part of the body shall activate the momentary action type switch. The bulb and cord shall be suitable for use in an oxygen tent. For long life and dependable operation, the air-operated switch shall be enclosed in the stainless steel plug.

The plug shall be equipped with an insulated, plated steel spring strain relief, and shall plug into the jack receptacle of standard patient stations.

A stainless steel bed clamp with mylar strap shall be permanently attached to the cord. The bed clamp shall be movable for adjustment. Detachable type clamp which may be inadvertently misplaced or lost shall not be acceptable.

The unit shall be able to withstand ethylene oxide sterilization procedures. The white washable polyvinyl chloride (PVC) cord shall be 6 feet (1.83 m). The plug shall be: 1-1/4" (3.18 cm) long. The bulb shall be 2-3/4" (6.99 cm) long. The cordset shall be Underwriter's Laboratories, Inc. listed.

Model M88

GERIATRIC CALL BUTTON

° PROVIDES NURSE CALL ORIGINATION

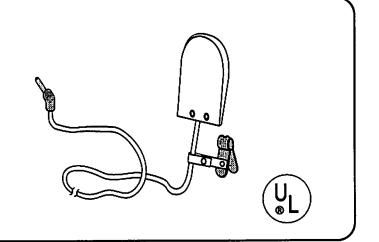
° LIGHT PRESSURE ACTUATES CALL

° ADJUSTABLE SECURITY CLAMP

° INSULATED AGAINST SHOCK HAZARD

° CORDSET EASILY STERILIZED

° RUGGED MOLDED PLUG



DESCRIPTION

Geriatric call button and cordset used for the aged and incapacitated.

SWITCH

Insulated stainless steel switch plates.

ACTUATION

Light pressure anywhere on button housing activates the switch.

HOOKUP

Plugs into jack receptacle on patient station.

UNIT STERILIZATION

Withstands ethylene oxide sterilization procedures.

PLUG

One-piece construction molded onto cord.

CORD

White washable polyethylene.

BED CLAMP

Stainless steel bed clamp with mylar strap permanently attached to cord.

HOUSING AND FINISH

Polyethylene outer jacket finished in white.

DIMENSIONS

Overall length of cord: 6' (1.83 m).

Button housing: 2" (5.08 cm) wide x 3" (7.62 cm)

high x 1-1/2" (3.81 cm) deep.

GERIATRIC CALL BUTTON

The Model M88 geriatric call button cordset shall be of the momentary action type. A call shall be originated by light hand or body action anywhere on housing.

The plug shall be molded onto the cord. For dependability, the plate type switch shall be constructed of insulated stainless steel.

A stainless steel bed clamp with mylar strap shall be permanently attached to the cord. The bed clamp shall be movable for adjustment. Detachable type clamp which may be inadvertently misplaced or lost shall not be acceptable.

The outer jacket button housing and cord shall be white polyethylene. The maximum overall cord length shall be 6 feet (1.83 m). The maximum dimensions of the button housing shall be: 2" (5.08 cm) wide x 3" (7.62 cm) high x 1-1/2" (3.81 cm) deep. The cordset shall be Underwriter's Laboratories, Inc. listed.

NOTE: The Model M88 call origination device is NOT to be used by patients undergoing oxygen therapy.

Model M18A, -15

CALL BUTTON CORDSET

PROVIDES NURSE CALL ORIGINATION

° FAST SNAP ACTION SPRING RETURN SWITCH

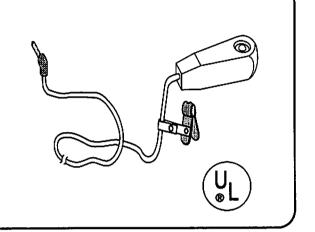
° ADJUSTABLE SECURITY CLAMP

° INSULATED AGAINST SHOCK HAZARD

° PURE SILVER SWITCH CONTACTS

° STURDY, HIGH IMPACT MOLDED HOUSING

° RUGGED MOLDED PLUG



DESCRIPTION

Nurse call origination button and integrated cordset.

SWITCH

Contact Rating: 2 amps @ 20 VDC or Peak AC. Initial Contact Resistance: 50 milliohms maximum.

Case Material: Polyacetal.

Operating Force: 100 grams maximum. Return Force: 5 grams minimum.

Contacts: Pure silver.

BUTTON

Momentary action type with spring return.

HOOKUP

Plugs into jack receptacle on patient station.

UNIT STERILIZATION

Withstands ethylene oxide sterilization procedures.

PLUG

One-piece construction molded onto cord.

CORD

White washable polyethylene.

BED CLAMP

Stainless steel bed clamp with mylar strap permanently attached to cord.

HOUSING

High-impact, molded housing with cordset strain relief.

FINISH

Call button housing and cord finished in white.

DIMENSIONS

Overall length of cord: 6' (1.83 m) or 15' (4.58m). Button housing: 1-1/4" (3.18 cm) wide x 3-1/2" (8.89 cm) high x 3/4" (1.91 cm) deep.

CALL BUTTON CORDSET

The Model M18A or M18A-15 shall provide nurse call in a button with integrated cordset. The button shall be a momentary action type with spring return.

Specification for the switch shall be as follows:
Contact rating- 2 amps @ 20VDC peak AC; initial contact resistance - 50 milliohms maximum
Operating force- 100 grams maximum; Return force- 5 grams minimum
Contacts- pure silver; case material- polyacetal.

The unit shall be supplied in a high impact molded housing. The cord shall be constructed with special strain relief to prevent damage. The plug shall be molded onto cord for long-life, trouble-free operation.

A stainless steel bed clamp with mylar strap shall be permanently attached to the cord. Detachable type clamp which may be inadvertently misplaced or lost shall not be acceptable. The bed clamp shall be movable for adjustment.

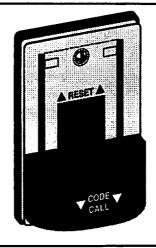
The finish of the polyethylene cord and housing shall be white. The unit shall be able to withstand ethylene oxide sterilization procedures. The maximum overall cord length shall be 6 feet (8.83 m) or 15 feet (4.58m). The maximum dimensions of the housing shall be: 1-1/4" (3.18 cm) wide x 3-1/2" (8.89 cm) high x 3/4" (1.91 cm) deep. The cordset shall be Underwriter's Laboratories, Inc. listed.

NOTE: The Model M18A call origination device is NOT to be used by patients undergoing oxygen therapy.

Model 36920-1

CODE BLUE STATION CARE/COM II-E

- ° CALL ORIGINATION INDICATOR LAMP
- ° CALL RESET FROM ORIGINATION POINT ONLY
- ° HIGH VISIBILITY LARGE BLUE BUTTON
- NON-CONDUCTIVE MOUNTING SCREWS





DESCRIPTION

Model 36920-1 is a wall flush or surface mounted blue combination call and reset button with indicator lamp for originating code blue (Level 1) calls.

CONTROLS AND INDICATORS

Integrated call and reset slide-type button with replaceable indicator lamp.

SWITCH

Magnetically activated switch with hermetically sealed relays for resistance to contamination.

WATERPROOF APPLICATIONS

The Model 36920-1 Code Blue Station meets UL waterproof requirements when flush-mounted onto a flat, non-tiled surface using 7 foot-pounds of torque.

INSTALLATION

Mounting bracket will permit correction of minor misalignment of backbox in wall.

HOUSING AND FINISH

Faceplate: High-impact, molded thermoplastic with grey finish, supplied with nylon screws for mounting Backbox: UL-listed metal surface or flush-mount backbox with a single-gang opening, available separately.

DIMENSIONS

Station Unit: 2-34" (6.99 cm) wide x 4-1/2" (11.43 cm) high.

Surface Housing: 2-7/8" (7.30 cm) wide x 4-5/8" (11.75 cm) high x 2-3/4" (6.99 cm) deep, available separately.

Flush Backbox: 4-11/16" (11.91 cm) square electrical box with single-gang adapter for total depth of 2-7/8" (7.30 cm), available separately.

CODE BLUE STATION

The wall recessed or surface mounted code blue station shall be a blue combination call and reset button with indicator lamp for originating code blue calls. White nomenclature shall appear on call button for easy recognition. Code blue calls (level 1) shall be cancelable only at the station where it originated.

A slide-type button shall be used to operate a magnetically activated switch with hermetically sealed relays for resistance to contamination.

The Model 36920-1 Code Blue Station shall be able to be used in waterproof applications when flush-mounted onto a flat, non-tiled surface using 7 foot-pounds of torque per UL requirements.

The mounting bracket shall permit correction of minor misalignment of backbox in wall. All components shall be mounted on a faceplate designed to fit into the opening of a UL-listed metal surface or flush-mount backbox with a single gang adapter. Nylon screws shall be provided to mount the faceplate for maximum safety against electrical shock.

The faceplate shall be finished in off-white. The maximum dimensions shall be: station unit - 2-¾" (6.99 cm) wide x 4-½" (11.43 cm) high. Surface housing - 2-7/8" (7.30 cm) wide x 4-5/8" (11.75 cm) high x 2-¾" (6.99 cm) deep. Flush backbox - 4-11/16" (11.91 cm) square electrical box with one-gang adapter for a total depth of 2-7/8" (7.30 cm), available separately.

Model 36900-2

EMERGENCY STATION CARE/COM II-E

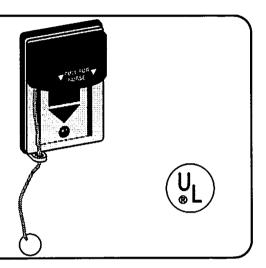
CALL ORIGINATION INDICATOR LAMP

° CALL RESET FROM ORIGINATION POINT ONLY

° HIGH VISIBILITY LARGE RED BUTTON

PULLCORD INSTRUCTIONS ON FACEPLATE

° NON-CONDUCTIVE MOUNTING SCREWS



DESCRIPTION

Model 36900-2 is a wall recessed or surface mounted red combination call and reset button with indicator lamp for originating emergency (Level 4) calls. A 6' pullcord is provided for ease of operation in a bathroom or shower environment.

CONTROLS AND INDICATORS

Integrated call and reset slide-type button with replaceable indicator lamp.

SWITCH

Magnetically activated switch with hermetically sealed relays for resistance to contamination.

WATERPROOF APPLICATIONS

The Model 36900-2 Emergency Station meets UL waterproof requirements when flush-mounted onto a flat, non-tiled surface using 7 foot-pounds of torque.

INSTALLATION

Mounting bracket will permit correction of minor misalignment of backbox in wall.

HOUSING AND FINISH

Station Unit: High-impact, molded thermoplastic with grey finish, supplied with nylon screws for mounting Backbox: UL-listed metal surface- or flush-mount backbox with a single-gang opening, available separately.

DIMENSIONS

Station Unit: 2-34" (6.99 cm) wide x 4-1/2" (11.43 cm) high.

Surface Housing: 2-7/8" (7.30 cm) wide x 4-5/8" (11.75 cm) high x 2-34" (6.99 cm) deep, available separately.

Flush Backbox: 4-11/16" (11.91 cm) square electrical box with single-gang adapter for total depth of 2-7/8" (7.30 cm), available separately.

EMERGENCY STATION

The flush- or surface-mounted emergency station shall be a red combination call and reset button with indicator lamp for originating emergency calls. White nomenclature shall appear on call button for easy recognition. Emergency calls (level 4) shall be cancelable only at the emergency station where it originated.

A slide-type button shall be used to operate a magnetically activated switch with hermetically sealed relays for resistance to contamination.

The Model 36900-2 Emergency Station shall be able to be used in waterproof applications when flush-mounted onto a flat, non-tiled surface using 7 foot-pounds of torque per UL requirements.

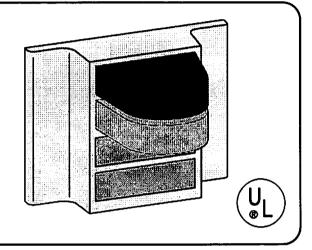
The mounting bracket shall permit correction of minor misalignment of backbox in wall. All components shall be mounted on a faceplate designed to fit into the opening of a UL-listed metal surface- or flush-mount backbox with a single-gang adapter. Nylon screws shall be provided to mount the faceplate for maximum safety against electrical shock.

The faceplate shall be finished in grey. The maximum dimensions shall be: station unit - 2-¾" (6.99 cm) wide x 4-½" (11.43 cm) high. S41 housing - 2-7/8" (7.30 cm) wide x 4-5/8" (11.75 cm) high x 2-¾" (6.99 cm) deep, available separately. Flush backbox - 4-11/16" (11.91 cm) square electrical box with one-gang adapter for a total depth of 2-7/8" (7.30 cm), available separately.

Model MDLS/W42

4-SECTION DOME LAMP CARE/COM II-E

- ° UP TO FOUR SEPARATE VISUAL SIGNALS
- ° MAXIMUM VISIBILITY FROM ALL SIDES
- ° FACEPLATE RATED 940V-O BY UL
- ° PLUG-IN LENSES AND SOCKETS
- ° FILLER PLATES AVAILABLE FOR UNUSED OPENINGS
- ° FLEXIBLE INSTALLATION



DESCRIPTION

Surface, wall or ceiling mounted modularly constructed dome lamp with provisions for up to four colored lenses (white, green, amber, red, or blue). The dome light base consists of a yoke assembly, faceplate, tubular fasteners, and pan head screws. The lamps, lamp sockets and colored lenses are ordered separately as required. When the dome lamp is not fully equipped with four lamps, filler plates are available to cover the unequipped openings.

COMPONENTS REQUIRED

The dome lamp components available separately are:

Lamp	30-23-01820
Lamp Socket	A44835
White Lens	A44376-1W
Green Lens	A44376-1G
Amber Lens	A44376-1A
Red Lens	A44376-1R
Blue Lens	A44376-1B
Filler Plate	A44377

LAMPS

28V at 100ma. Miniature bayonet base type.

INSTALLATION

A yoke is supplied to allow mounting into a standard two-gang electrical box. The yoke will permit correction of minor misalignment of backbox. The faceplate is mounted into yoke without the need for mounting screws.

HOUSING AND FINISH

Dome Lamp: Flame-retardant, molded thermoplastic faceplate finished in off-white.

Backbox: UL-listed, flush-mount with two gang opening, supplied by others.

DIMENSIONS

Faceplate: 4-9/16" (11.59 cm) wide x 4-1/2" (11.43 cm)

Surface Housing: 4-¾" (12.07 cm) square x 2-¾" (6.99 cm) deep.

Backbox: 4-11/16" (11.91 cm) square electrical box with two-gang adapter for total depth of 2-7/8" (7.30 cm), supplied by others.

4-SECTION DOME LAMP

The surface wall- or ceiling-mounted Model MDLS/W42 Dome Lamp shall be of modular construction to permit the greatest flexibility in terms of application and installation. The dome lamp shall be clearly visible from all directions. Each dome lamp has provisions for up to four colored lamp sections (of which three- preferably, white, red, and blue, are used).

The dome light base consists of a yoke assembly, faceplate, tubular fasteners, and pan head screws. Lamps, lamp sockets, and colored lenses shall be ordered separately as required. When the dome lamp is not fully equipped with four lamps, filler plates shall be available to cover the unequipped openings. Required dome lamp components available separately shall be as follows:

Lamp	30-23-01820
Lamp Socket	A44835
White Lens	A44376-1W
Green Lens	A44376-1G
Amber Lens	A44376-1A
Red Lens	A44376-1R
Blue Lens	A44376-1B
Filler Plate	A44377

The lamp shall be a miniature bayonet base type and shall operate on 28V at 100ma. Plug-in lenses and lamp sockets shall allow easy replacement of lamps.

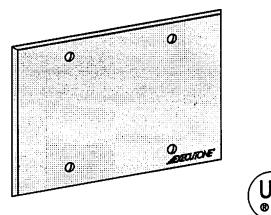
For ease of installation and maintenance, a yoke shall be provided to allow mounting of the dome lamp into an existing vertically mounted UL-listed metal surface or flush-mount backbox with a two-gang adapter, and shall permit correction of minor backbox misalignment. The faceplate shall mount into the yoke without the need for mounting screws.

The dome lamp faceplate shall be made of high-impact molded thermoplastic finished in off-white, which shall also have non-shattering and low water absorption characteristics and shall be self extinguishing rated 94V-O by UL. The backbox shall be surface- or flush-mount, with a two-gang adapter, available separately. The dimensions shall be: faceplate - 4-9/16" (11.59 cm) wide x 4-½" (11.43 cm) high; surface housing - 4-¾" (12.07 cm) square x 2-¾" (6.99 cm) deep, available separately; flush backbox - 4-11/16" (11.91 cm) square electrical box with two-gang adapter for total length of 2-7/8" (7.30 cm), available separately.

Models 31780-2 and 31770-2

SINGLE AND DUAL ENTERTAINMENT **INTERFACES**

- ° ALLOWS REMOTE CONTROL OF TV SET
- * SELECTION OF FIVE AUDIO CHANNELS
- ° PLUGS INTO PREWIRED EDGE CONNECTOR
- ° COMPACT DESIGN





DESCRIPTION

Flush- or surface-mounted single and dual entertainment interfaces, used with patient control unit and patient station, for remote control of television set, as well as for selection of five radio or other audio programs. Single unit supports one bed, and dual unit supports two beds.

APPLICATIONS

Television sets must be equipped for automatic adjustment of color and tint, and audio entertainment distribution systems can have up to five program channels.

POWER REQUIREMENT

One Model M-217/4101 Power Supply supports a combination of up to 40 entertainment interface units.

INSTALLATION

For ease of installation and maintenance, the unit will plug into prewired edge connectors.

HOUSING AND FINISH

Faceplate: High-impact, molded thermoplastic finished

Backbox: UL-listed metal surface- or flush-mount backbox with a three-gang opening, available separately.

DIMENSIONS

Faceplate: 6-3/8" (16.19cm) wide x 4-1/2" (11.43cm)

Backbox: 8-13/16" (22.38cm) wide x 4-1/2" (11.43cm) high x 3-5/16" (8.41cm) deep

SINGLE AND DUAL ENTERTAINMENT INTERFACES

The flush- or surface-mounted 31780-2 Single Entertainment Interface and 31770-2 Dual Entertainment Interface shall be used with patient control unit and patient station for remote control of television set, as well as for selection of five radio or other audio programs.

The entertainment interface shall require television sets equipped for automatic adjustment of color and tint and audio entertainment distribution system providing up to five program channels.

One Model M-217/4101 Power Supply shall support a combination of up to 40 entertainment interface units.

For ease of installation and maintenance, the interface unit shall plug into prewired edge connectors. All components shall be mounted on a faceplate designed to fit into the opening of a UL-listed metal surface- or flush-mount backbox with a three-gang adapter.

The entertainment and environmental interface unit faceplate shall be made of high-impact, molded thermoplastic finished in grey. The backbox shall be surface- or flush-mount, with three-gang adapter, available separately. The dimensions shall be: Faceplate - 6-3/8" (16.19cm) wide x 4-1/2" (11.43cm) high; backbox - 8-13/16" (22.38cm) wide x 4-1/2" (11.43cm) high x 3-5/16" (8.41cm) deep.

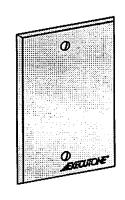
Models 33920-1 and 33920-2

TELEVISION AND LIGHT INTERFACE (SINGLE AND DUAL)

ALLOWS REMOTE CONTROL OF TV SET AND/OR LIGHT

PLUGS INTO PREWIRED IDC CONNECTORS

° COMPACT DESIGN





DESCRIPTION

Flush- or surface-mounted television and light interface, used with patient control unit and patient station, for remote control of television set and/or reading light. 33920-1 provides one audio channel; 33920-2 provides two individual audio channels.

APPLICATIONS

Television sets must be equipped for automatic adjustment of color and tint.

Interface unit provides two sets of normally open dry contacts rated for 24 volts nominal at 0.75 ampere maximum. These outputs must connect to low voltage controller(s) for remote control of television or reading light.

POWER REQUIREMENT

One Model M-217/4101 Power Supply supports a combination of up to 40 television and light interface units.

INSTALLATION

For ease of installation and maintenance, the unit will plug into prewired IDC connectors.

HOUSING AND FINISH

Faceplate: high-impact, molded thermoplastic finished in grey.

Backbox: UL-listed metal surface- or flush-mount backbox with a single-gang opening, available separately.

DIMENSIONS

Faceplate: 2-3/4" (6.99cm) wide x 4-1/2" (11.43cm)

Surface Housing: 2-7/8" (7.30cm) wide x 4-5/8" (11.75cm) high x 2-3/4" (6.99cm) deep, available separately. Flush Backbox: 4-11/16" (11.91cm) square electrical box with single-gang adapter for a total depth of 2-7/8" (7.30cm), available separately.

TELEVISION AND LIGHT INTERFACE

The flush- or surface-mounted 33920-1 (single) and 33920-2 (dual) Television and Light Interface shall be used with patient control unit and patient station for remote control of television set and/or reading light.

The television and light interface shall require television sets equipped for automatic adjustment of color and tint.

The television and light interface shall provide two sets of normally open dry contacts rated for 24 volts nominal at 0.75 ampere maximum. These outputs must connect to a television set or to a low voltage controller which shall be able to control lights.

One Model M-217/4101 Power Supply shall support a combination of up to 40 television and light interface units.

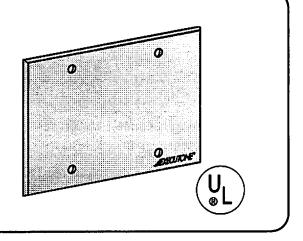
For ease of installation and maintenance, the interface unit shall plug into prewired IDC connectors. All components shall be mounted on a faceplate designed to fit into the opening of a UL-listed metal surface- or flush-mount backbox with a single-gang adapter.

The television and light interface unit faceplate shall be made of high-impact, molded thermoplastic finished in grey. The backbox shall be surface- or flush- mount, with single-gang adapter, available separately. The dimensions shall be: faceplate - 2-3/4" (6.99cm) wide x 4-1/2" (11.43cm) high; surface housing - 2-7/8" (7.30cm) wide x 4-5/8" (11.75cm) high x 2-3/4" (6.99cm) deep, available separately; flush backbox - 4-11/16" (11.91cm) square electrical box with single-gang adapter for total depth of 2-7/8" (7.30cm), available separately.

Model J7390RCS/W43P

RADIO/TV & COMFORT CONTROL

- ° ALLOWS REMOTE CONTROL OF TV SET
- ° SELECTION OF FIVE AUDIO CHANNELS
- ° CONTROLS FOUR COMFORT COMMANDS
- ° CONNECTIONS VIA PREWIRED CONNECTORS
- ° COMPACT DESIGN
- ° NON-CONDUCTIVE MOUNTING SCREWS



DESCRIPTION

Wall recessed or surface mounted radio/TV and comfort control, used with patient control unit and patient station, for remote control of television set, bed position, room lighting, drapes and one additional function, and for selection of five radio or other audio programs.

APPLICATIONS

For television sets equipped for automatic adjustment of color and tint, and audio entertainment distribution system providing five program channels.

ACTIVATION OF ASSOCIATED DEVICES

Provided with normally open dry contacts rated for 24 volts nominal at 0.75 ampere maximum.

POWER REQUIREMENT

One Model M-217/4101 Power Supply supports a combination of up to 80 radio/TV & comfort control circuits. One radio/TV & comfort control unit is two circuits.

INSTALLATION

For ease of installation and maintenance, the unit will plug into prewired edge connector.

HOUSING AND FINISH

Faceplate: High-impact, molded thermoplastic with off-white color finish, supplied with nylon screws for mounting

S43 Housing: Three-gang box with metal surface finished in alumex, for surface mounting.
W43 Backbox: Multi-gang, metal backbox with adapter for flush mounting, supplied by others.

DIMENSIONS

Faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm) high.

S43 Housing: 6-1/2" (16.51 cm) wide x 4-1/4" (12.07 cm) high x 2-1/4" (6.99 cm) deep.

W43 Backbox: 8-13/16" (22.38 cm) wide x 4-1/2" (11.43 cm) high, electrical box with two-gang adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

RADIO/TV AND COMFORT CONTROL

The wall recessed or surface mounted radio/TV and comfort control shall be used with patient control unit and patient station for remote control of television set, bed position, room lighting, drapes and one additional function, and for selection of five radio and or other audio programs.

The radio/TV and comfort control shall operate with television sets equipped for automatic adjustment of color and tint and audio entertainment distribution system providing up to five program channels.

The radio/TV and comfort control shall be provided with normally open dry contacts for activation of associated devices. The contacts shall be rated for 24 volts nominal at 0.75 ampere maximum.

One Model M-217/4101 Power Supply shall support a combination of up to 80 radio/TV & comfort control circuits. Each radio/TV & comfort control unit shall be comprised of two circuits.

For ease of installation and maintenance, the unit shall plug into prewired edge connector. All components shall be mounted on a faceplate designed to fit into the opening of a standard three-gang electrical backbox. For maximum safety against electrical shock, the faceplate shall be mounted using non-conductive screws.

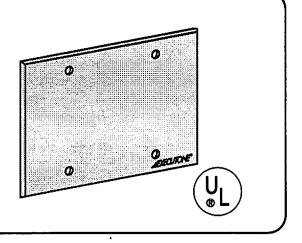
The S43 housing shall be a metal three-gang box for surface mounting. The W43 backbox shall be supplied by others. The finish shall be: housing - molded thermoplastic faceplate and alumex surface housing; backbox - molded thermoplastic faceplate and metal backbox supplied by others.

The maximum dimensions shall be: faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm) high. S43 housing: 6-1/2" (16.51 cm) wide x 4-1/4" (12.07 cm) high x 2-1/4" (6.99 cm) deep. W43 backbox: 8-13/16" (22.38 cm) wide x 4-1/2" (11.43 cm) high, electrical box with three-gang adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

RADIO/TV SELECTOR UNITS

Model J7376R1S/W43P Model J7376R2S/W43P

- ° FOR SINGLE OR DUAL PATIENT STATION
- ° ALLOWS REMOTE CONTROL OF TV SET(S)
- ° FIVE CHANNELS OF AUDIO PROGRAMS
- ° CONNECTIONS VIA PREWIRED CONNECTORS
- ° COMPACT DESIGN
- ONON-CONDUCTIVE MOUNTING SCREWS



DESCRIPTION

Wall recessed or surface mounted radio/TV selector unit, used with patient control unit and patient station, for remote control of television set and selection of five radio or other audio programs. Model J7376R1S/W43P provides entertainment control for one patient. Model J7376R2S/W43P provides individual entertainment control for two patients.

APPLICATIONS

For television sets equipped for automatic adjustment of color and tint, and audio entertainment distribution system providing five program channels.

POWER REQUIREMENT

One Model M-217/4101 Power Supply supports a combination of up to 80 radio/TV & comfort control circuits. A single unit is one circuit, a dual unit is two circuits.

INSTALLATION

For ease of installation and maintenance, the unit will plug into prewired edge connector.

HOUSING AND FINISH

Faceplate: High-impact, molded thermoplastic with off-white color finish, supplied with nylon screws for mounting

S43 Housing: Three-gang box with metal surface finished in alumex, for surface mounting.
W43 Backbox: Multi-gang, metal backbox with adapter for flush mounting, supplied by others.

DIMENSIONS

Faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm) high

S43 Housing: 6-1/2" (16.51 cm) wide x 4-3/4" (12.07

cm) high x 2-34" (6.99 cm) deep. W43 Backbox: 8-13/16" (22.38) wide x 4-1/2" (11.43

cm) high, electrical box with two-gang adapter for total

depth of 3-5/16" (8.41 cm), supplied by others.

RADIO/TV SELECTOR UNITS

The wall recessed or surface mounted radio/TV selector unit shall be used with patient control unit and patient station for remote control of television set and selection of five radio and or other audio programs. Model J7376R1S/W43P shall provide entertainment control for one patient. Model J7376R2S/W43P shall provide individual entertainment control for two patients.

The radio/TV selector units shall operate with television sets equipped for automatic adjustment of color and tint and audio entertainment distribution system providing up to five program channels.

One Model M-217/4101 Power Supply shall support a combination of up to 80 radio/TV selector circuits. One single selector unit shall be comprised of one circuit; one dual selector unit shall be comprised of two circuits.

For ease of installation and maintenance, the unit shall plug into prewired edge connector. All components shall be mounted on a faceplate designed to fit into the opening of a standard three-gang electrical backbox. For maximum safety against electrical shock, the faceplate shall be mounted using non-conductive screws.

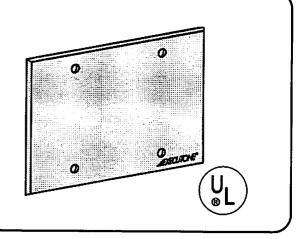
The S43 housing shall be a metal three-gang box for surface mounting. The W43 backbox shall be supplied by others. The finish shall be: housing - molded thermoplastic faceplate and alumex surface housing; backbox - molded thermoplastic faceplate and metal backbox supplied by others.

The maximum dimensions shall be: faceplate: 6-3/8" (16.19 cm) wide x $4-\frac{1}{2}$ " (11.43 cm) high. S43 housing: $6-\frac{1}{2}$ " (16.51 cm) wide x $4-\frac{1}{4}$ " (12.07 cm) high x $2-\frac{1}{4}$ " (6.99 cm) deep. W43 backbox: 8-13/16" (22.38 cm) wide x $4-\frac{1}{2}$ " (11.43 cm) high, electrical box with three-gang adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

Model J7377C1S/W43P Model J7377C2S/W43P

COMFORT CONTROL UNITS

- ° FOR SINGLE OR DUAL PATIENT STATION
- ° CONTROLS 4 OR 8 COMFORT COMMANDS
- ° CAN OPERATE RADIO/TV SELECTOR UNIT
- CONNECTIONS VIA PREWIRED CONNECTORS
- ° COMPACT DESIGN
- ° NON-CONDUCTIVE MOUNTING SCREWS



DESCRIPTION

Wall recessed or surface mounted comfort control, used with patient control unit and patient station, for remote control of bed position, room lighting, drapes, and one additional function. Model J7377C1S/W43P provides comfort control for one patient. Model J7377C2S/ W43P provides individual comfort control for two patients.

ACTIVATION OF ASSOCIATED DEVICES

Provided with normally open dry contacts rated for 24 volts nominal at 0.75 ampere maximum.

POWER REQUIREMENT

One Model M-217/4101 Power Supply supports a combination of up to 80 comfort control circuits. A single unit is one circuit, a dual unit is two circuits.

INSTALLATION

For ease of installation and maintenance, the unit will plug into prewired edge connector.

HOUSING AND FINISH

Faceplate: High-impact, molded thermoplastic with off-white color finish, supplied with nylon screws for mounting

S43 Housing: Three-gang box with metal surface finished in alumex, for surface mounting. W43 Backbox: Multi-gang, metal backbox with adapter for flush mounting, supplied by others.

DIMENSIONS

Faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm)

S43 Housing: 6-1/2" (16.51 cm) wide x 4-3/4" (12.07

cm) high x 2-34" (6.99 cm) deep.

W43 Backbox: 8-13/16" (22.38) wide x 4-1/2" (11.43 cm) high, electrical box with two-gang adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

COMFORT CONTROL UNITS

The wall recessed or surface mounted comfort control shall be used with patient control unit and patient station for remote control of bed position, room lighting, drapes, and one additional function. Model J7377C1S/W43P shall provide comfort control for one patient. Model J7377C2S/W43P shall provide individual comfort control for two patients.

The comfort control shall be provided with normally open dry contacts for activation of associated devices. The contacts shall be rated for 24 volts nominal at 0.75 ampere maximum.

One Model M-217/4101 Power Supply shall support a combination of up to 80 comfort control circuits. One single selector unit shall be comprised of one circuit; one dual selector unit shall be comprised of two circuits.

For ease of installation and maintenance, the unit shall plug into prewired edge connector. All components shall be mounted on a faceplate designed to fit into the opening of a standard three-gang electrical backbox. For maximum safety against electrical shock, the faceplate shall be mounted using non-conductive screws.

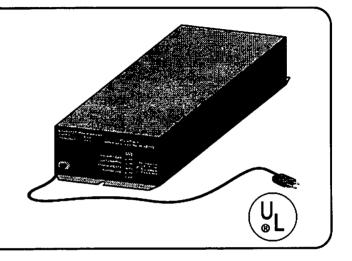
The S43 housing shall be a metal three-gang box for surface mounting. The W43 backbox shall be supplied by others. The finish shall be: **housing** - molded thermoplastic faceplate and alumex surface housing; **backbox** - molded thermoplastic faceplate and metal backbox supplied by others.

The maximum dimensions shall be: faceplate: 6-3/8" (16.19 cm) wide x 4-1/2" (11.43 cm) high. S43 housing: 6-1/2" (16.51 cm) wide x 4-1/4" (12.07 cm) high x 2-1/4" (6.99 cm) deep. W43 backbox: 8-13/16" (22.38 cm) wide x 4-1/2" (11.43 cm) high, electrical box with three-gang adapter for total depth of 3-5/16" (8.41 cm), supplied by others.

Model M-217/4101

POWER SUPPLY CARE/COM II-E

- ° SOLID STATE CONSTANT VOLTAGE REGULATION
- OVERLOAD AND SHORT CIRCUIT PROTECTION
- ° PROGRAMMABLE FOR 12V OR 24V
- ° LONG-LIFE DESIGN
- ° MOLDED THREE-PRONG PLUG
- ° COMPACT. STURDY METAL HOUSING



DESCRIPTION

Wall or shelf mounted single output regulated DC power supply rated for 12 or 24 volts at 3 amperes maximum.

ENVIRONMENTAL REQUIREMENTS

Temperature Range: 0° to 30° C (32° to 85° F). Relative Humidity: 10 - 85% noncondensing.

POWER REQUIREMENTS

120 volts \pm 10% 60 Hz AC, 20 Amp computer grade service line. Maximum power consumption: 120VA/410 BTU.

OUTPUT

Voltage: Nominal 12 or 24 volts DC \pm 5%.

Current: Up to 3 amperes.

Ripple and Noise: Less than 100 mV peak to peak. Line and Load Regulation: ± 1% maximum. Ground Polarity: Floating (ungrounded) output.

OUTPUT PROTECTION

Current limiting and overvoltage crowbar protected.

HOOKUP

Terminal strip with screw type connectors.

LINE CORD

Heavy duty 6' (1.83 m) terminated with molded three-prong plug.

HOUSING AND FINISH

Metal case provided with two mounting holes, in textured enamel finish.

DIMENSIONS

Maximum dimensions are 11-3/8" (29.9 cm)W x 3-1/2" (8.89 cm)H x 4-9/16" (11.59 cm)D.

POWER SUPPLY

The wall or shelf mounted power supply shall provide a regulated DC single output rated for 12 or 24 volts at 3 ampere maximum. The power supply shall contain overloading, short circuit, and overvoltage protection.

The power supply shall be designed for a long life of continuous operation. Operating/storage temperature shall be 0° to 30° C (32° F to 85° F). Relative humidity of 10 - 85% noncondensing.

The input power requirements shall be 120 volts AC \pm 10% at 60 Hz \pm 3 Hz, computer grade line. The power consumption shall be 120VA/410 BTU maximum.

The output voltage shall be nominal 12 or 24 volts DC \pm 5% at up to 3 amperes. Ripple and noise shall be less than 100 mV peak to peak. Output voltage regulation with line and load changes shall be \pm 1% maximum. The output shall be floating with respect to ground.

A heavy duty six-foot (1.83 m) line cord terminated with molded three-prong plug shall be provided for input connections. The output connections shall be by means of a four-screw terminal strip.

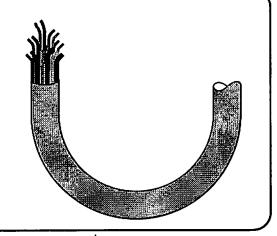
The power supply shall be housed in a sturdy metal case provided with two mounting holes. The housing shall be finished in textured enamel. The housing maximum dimensions shall be 11-3/8" (29.9 cm) wide x 3-1/2" (8.89 cm) high x 4-9/16" (11.59 cm) deep.

CABLE

WN16-1 (supersedes WN15-1)

- RODENT RESISTANT OUTER JACKET
- UL LISTED PER UL SUBJECT 13 FOR TYPE CL2
- ° EASY TO STRIP
- FLEXIBLE
- ABRASION RESISTANT





DESCRIPTION

#22AWG 5 pair and #14AWG 2 pair composite cable with overall polyvinyl cloride (PVC) jacket.

CONDUCTORS

Component I and II - Each conductor is #22AWG, consisting of seven strands of #30AWG bare copper wire bunch stranded with a nominal lay length of 3/4" (1.91cm). Component III - Each conductor is #14AWG, consisting of seven strands of #22AWG bare copper bunch stranded with a nominal lay length of 3/4" (1.91cm).

INSULATION

Solid colored 75°C semi-rigid PVC with a minimum wall thickness of 0.010" (0.254mm).

ASSEMBLY

Component I - Two conductors twisted together to form four pairs. Four pairs are cabled together separately with an aluminum/polyester tape for 100% shielding and includes a #22AWG solid tinned copper drain wire. Component II - Two conductors twisted together to form one pair are cabled together separately with an aluminum/polyester tape for 100% shielding and includes a #22AWG solid tinned copper drain wire. Component III-Two conductors twisted together to form two pairs. Cable - The shielded four pair group, shielded one pair and remaining three pairs are cabled together with a mylar binder and a 6-1/2" (16.5cm) maximum lay length.

JACKET

PVC with a minimum wall thickness of 0.020" (0.508mm). A rip cord is supplied underneath the jacket.

DC RESISTANCE

Component I and II - 15.7 ohms per 1,000 feet (304.8m) maximum at 68° F (20° C). Component III - 2.57 ohms maximum per 1,000 feet (304.8m) at 68° F (20° C).

UL LISTING

UL Listed per UL Subject 13 for Type CL2 cable.

CABLE FINISH

Outer jacket color is EXECUTONE Standard Metalustre.

CONDUCTOR COLOR CODE

Component I:

Blue and Brown (shielded), Blue/White and Brown/ White (shielded), Green and Slate (shielded), Green/White and Slate/White (shielded)

Component II:

Violet and Orange (shielded)

Component III:

Red and Black, Yellow and Black/White

OUTSIDE DIAMETER

Cable shall have a maximum outside diameter of 0.450" (11.4mm).

CABLE

The WN16-1 Cable shall be a composite cable consisting of #22AWG 5 pair and #14AWG 2 pair with an overall polyviny chloride (PVC) jacket. Component I and II shall contain #22AWG conductors, each shall consist of seven strands of #30AWG bare copper wire bunch stranded with a nominal lay length of 3/4" (1.91cm). Component III shall contain #14AWG conductors; each shall consist of seven strands of #22AWG bare copper wire bunch stranded with a nominal lay length of 3/4" (1.91cm). Assembly of the WN16-1 Cable shall be as follows: Component I shall have two conductors twisted together to form four pairs. The four pairs shall be cabled together separately with an aluminum/polyester tape for 100% shielding and shall include a #22AWG solid tinned copper drain wire; Component II shall have two conductors twisted together to form one pair. The pair shall be cabled together separately with an aluminum/polyester tape for 100% shielding and shall include a #22AWG solid tinned copper drain wire; Component III shall have two conductors twisted together to form two pairs; the shielded four pair, the shielded one pair and remaining two pairs shall be cabled together with a mylar binder and a 6-1/2" (16.5cm) maximum lay length.

The cable shall be UL Listed per Subject 13 for type CL2 cable.

The DC resistance of the Component I and II conductors shall not be more than 15.7 ohms per thousand feet (304.8m) at 68° F (20° C). The DC resistance of the Component III conductors shall not be more than 2.57 ohms per thousand feet (304.8m) of at 68° F (20° C).

Conductor insulation shall be solid colored 75° C semi-rigid PVC with minimum wall thickness of 0.010" (0.254mm). Cotton or other insulating materials which deteriorate with age shall not be acceptable. Wire color code shall be:

Component I:

Blue and Brown (shielded)
Blue/White and Brown/White (shielded)
Green and Slate (shielded)
Green/White and Slate/White (shielded)

Component II:

Violet and Orange (shielded)

Component III:

Red and Black

Yellow and Black/White

All conductors shall be covered and protected by an outer jacket of PVC with a minimum wall thickness of 0.020" (0.508mm). A rip cord shall be supplied underneath the jacket. The outer jacket shall be smooth and of good appearance. The jacket shall be easily stripped from the cable, but shall be tight enough to permit drawing the cable around sharp bends without the jacket sliding along the core or breaking.

The cable shall bear the EXECUTONE trademark with the approved cable model number printed on the cable and shall be finished in EXECUTONE Standard Metalustre. Additionally, the cable shall be marked to show conformance with "UL Subject 13 for Type CL2" at each place the EXECUTONE marking appears.

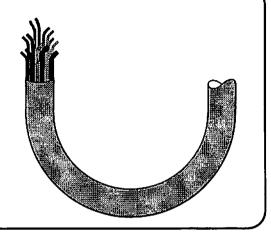
The outside diameter of the cable shall be 0.450 inch (11.4mm).

NOTE: The WN16-1 cable supersedes the WN15-1 cable.

WN12-1 (supersedes WN09-1, WN11-1)

- (superseaes WNU9-1, WN11-1)
 - RODENT RESISTANT OUTER JACKET
 - UL LISTED PER UL SUBJECT 13 FOR TYPE CL2
 - ° EASY TO STRIP
 - FLEXIBLE
 - ABRASION RESISTANT





CABLE

DESCRIPTION

#22AWG 3 pair and #14AWG 2 pair composite cable with overall polyvinyl cloride (PVC) jacket.

CONDUCTORS

Component I and II - Solid colored 75°C semi-rigid PVC with a minimum wall thickness of 0.010" (0.254mm). Component III - Solid colored 105°C semi-rigid PVC with a minimum wall thickness of 0.025" (0.635mm).

INSULATION

Solid colored 75°C semi-rigid PVC with a minimum wall thickness of 0.010" (0.254mm).

ASSEMBLY

Component I -

Two conductors twisted together to form two pairs. One pair is wrapped with an aluminum/polyester tape for 100% shielding and includes a #22AWG solid tinned copper drain wire. Component II -

Two conductors twisted together to form one pair. This pair is wrapped with an aluminum/polyester tape for 100% shielding and includes a #22AWG solid tinned copper drain wire. Component III -

Two conductors twisted together to form two pairs, each with a maximum 3" (7.6cm) lay length.

Cable - All five pairs are cabled together with a mylar binder and a 6" (15.2cm) maximum lay length.

JACKET

PVC with a minimum wall thickness of 0.020" (0.508mm). A rip cord is supplied underneath the jacket.

DC RESISTANCE

Component I and II - 15.7 ohms per 1,000 feet (304.8m) maximum at 68° F (20° C). Component III - 2.57 ohms maximum per 1,000 feet (304.8m) at 68° F (20° C).

UL LISTING

UL Listed per UL Subject 13 for Type CL2 cable.

CABLE FINISH

Outer jacket color is EXECUTONE Standard Metalustre.

CONDUCTOR COLOR CODE

Component I:

Blue and Brown (shielded), Green and Slate

Component II:

Violet and Orange (shielded)

Component III:

Red and Black, Yellow and Black/White

OUTSIDE DIAMETER

Cable shall have a maximum outside diameter of 0.450" (11.4mm).

CABLE

The WN12-1 Cable shall be a composite cable consisting of #22AWG 3 pair and #14AWG 2 pair with an overall polyvinyl chloride (PVC) jacket. Component I and II shall contain #22AWG conductors, each shall consist of seven strands of #30AWG bare copper wire bunch stranded with a nominal lay length of 3/4" (1.91cm). Component III shall contain #14AWG, consisting of seven strands of #22AWG bare copper bunch stranded with a nominal lay length of 3/4" (1.91cm). Assembly of the WN12-1 Cable shall be as follows: Component I shall have two conductors twisted together to form two pairs. One pair shall be wrapped with an aluminum/polyester tape for 100% shielding and shall include a #22AWG solid tinned copper drain wire; Component II shall have two conductors twisted together to form one pair, shall be wrapped with an aluminum/polyester tape for 100% shielding and shall include a #22AWG solid tinned copper drain wire; Component III shall have two conductors twisted together to form two pairs, each with a maximum 3" (7.6 cm) lay length; all five pairs shall be cabled together with a mylar binder and a 6" (15.2cm) maximum lay length.

The cable shall be UL Listed per Subject 13 for type CL2 cable.

The DC resistance of the Component I and II conductors shall not be more than 15.7 ohms per thousand feet (304.8m) at 68° F (20° C). The DC resistance of the Component III conductors shall not be more than 2.57 ohms per thousand feet (304.8m) of at 68° F (20° C).

Component I and II conductor insulation shall be solid colored 75° C semi-rigid PVC with minimum wall thickness of 0.010" (0.254mm). Component III conductor insulation shall be solid colored 105° C semi-rigid PVC with minimum wall thickness of 0.025" (0.635mm). Cotton or other insulating materials which deteriorate with age shall not be acceptable. Wire color code shall be:

Component I:

Blue and Brown (shielded)
Green and Slate

Component II:

Violet and Orange (shielded)

Component III:

Red and Black
Yellow and Black/White

All conductors shall be covered and protected by an outer jacket of PVC with a minimum wall thickness of 0.020" (0.508mm). A rip cord shall be supplied underneath the jacket. The outer jacket shall be smooth and of good appearance. The jacket shall be easily stripped from the cable, but shall be tight enough to permit drawing the cable around sharp bends without the jacket sliding along the core or breaking.

The cable shall bear the EXECUTONE trademark with the approved cable model number printed on the cable and shall be finished in EXECUTONE Standard Metalustre. Additionally, the cable shall be marked to show conformance with "UL Subject 13 for Type CL2" at each place the EXECUTONE marking appears.

The outside diameter of the cable shall be 0.450 inch (11.4mm).

NOTE: The WN12-1 cable shall supersede the WN09-1 and WN11-1 cables.

CABLE

WN08-3RD (red jacket) WN08-3BL (blue jacket)

- RODENT RESISTANT OUTER JACKET
- UL LISTED PER UL SUBJECT 13 FOR TYPE CL2
- ° EASY TO STRIP
- FLEXIBLE
- ABRASION RESISTANT





DESCRIPTION

#22AWG 4 pair composite cable with overall polyvinyl chloride (PVC) jacket.

CONDUCTORS

Each conductor is #22AWG, consisting of seven strands of #30AWG bare copper wire bunch stranded with a nominal lay length of 3/4" (1.91cm).

INSULATION

Conductors - colored PVC with minimum thickness of 0.010" (0.254mm).

Outer Jacket - PVC with minimum thickness of 0.025" (0.635mm).

ASSEMBLY

Each pair twisted together with a 1.5" (3.81cm) left hand lay. Four pairs assembled by twisting together with a 1.5" (3.81cm) left hand lay, covered with clear polyester tape and provided with nylon rip cord.

DC RESISTANCE

15.7 OHMS MAXIMUM PER 1,000 FEET (304.8M) AT 68° F (20° C).

DIELECTRIC STRENGTH TEST

500V RMS, 60Hz, for one minute, between each conductor and all other conductors connected together.

UL LISTED

UL Listed per UL Subject 13 for Type CL2 cable.

CABLE FINISH

Outer jacket color is based on the model number:

WN08-3RD Red WN08-3BL Blue

CONDUCTOR COLOR CODE

Pair 1 - one red and one green.

Pair 2 - one yellow and one black.

Pair 3 - one white and one blue.

Pair 4 - one brown and one orange.

OUTSIDE DIAMETER

Cable shall have a maximum outside diameter of 0.235" (5.969mm).

CABLE

The WN08-3 Cable shall contain four twisted pairs. The eight conductors shall be individually insulated. Each conductor is #22AWG, consisting of seven strands of #30AWG bare copper wire bunch stranded with a nominal lay length of 3/4" (1.91cm"). Each pair shall be twisted together with a one and one-half inch (3.81cm) left hand lay. The four pairs shall be assembled by twisting them together with a one and one-half inch (3.81cm) left hand lay and covering with clear polyester tape. Additionally, a nylon rip cord shall be provided.

The DC resistance of the #22AWG 7/30 BC - 15.7 ohms per thousand feet (304.8m) of conductor at 68° F (20° C). The cable shall be UL Listed per UL Subject 13 for type CL2 cable.

Wire insulation shall be colored polyvinyl chloride (PVC) with a minimum thickness of 0.010" (0.254mm). Cotton or other insulating materials which deteriorate with age shall not be acceptable. Wire color code shall be: Pair one - one red and one green; Pair two - one yellow and one black; Pair three - one white and one blue; Pair four - one brown and one orange.

The conductors shall be covered and protected by an outer jacket of PVC with a minimum thickness of 0.025" (0.635mm). The outer jacket shall be smooth and of good appearance. The jacket shall be easily stripped from the cable; but shall be tight enough to permit drawing the cable around sharp bends without the jacket sliding along the core or breaking.

The cable shall bear the EXECUTONE trademark with the approved cable model number either embossed or printed on the cable and shall be finished as follows: WN08-3RD - red, WN08-3BL - blue. Additionally, the cable shall be marked to show conformance with "UL listed per UL Subject 13 for Type CL2" at each place the EXECUTONE marking appears. If other than EXECUTONE cable is supplied, contractor shall obtain architects' approval after submitting a certified copy of test report on a sample coil of the cable from the lot to be supplied. The outside diameter of the cable shall be 0.235" (5.969mm).

WN08-3GY

CABLE

° UL LISTED PER UL SUBJECT 13 FOR TYPE CL2

° EASY TO STRIP

° RODENT RESISTANT OUTER JACKET

° FLEXIBLE

° ABRASION RESISTANT





DESCRIPTION

Cable containing four twisted pairs. Conductors polyvinyl chloride (PVC) insulated and protected by an outer jacket.

GAUGE AND TYPE

Eight conductors #22AWG soft-drawn copper wire.

ASSEMBLY

Each pair twisted together with a 1.5" (3.81 cm) left hand lay. Four pairs assembled by twisting together with a 1.5" (3.81 cm) left hand lay, covered with clear polyester tape and provided with nylon rip cord.

INSULATION

Conductors - Colored polyvinyl chloride with minimum thickness of 0.010" (0.254 mm).

Outer Jacket - Polyvinyl chloride with minimum thickness of 0.025" (0.635 mm).

DC RESISTANCE

#22AWG - 16.14 ohms maximum per 1,000 feet (304.8 m) at 20° C (68° F).

DIELECTRIC STRENGTH TEST

500V RMS, 60Hz, for one minute, between each conductor and all other conductors connected together.

UL LISTED.

Cable is UL listed per UL subject 13 for Type CL2 cable.

CABLE FINISH

Outer jacket color is EXECUTONE standard Metalustre.

WIRE COLOR CODE

Pair 1 - one red and one green.

Pair 2 - one yellow and one black.

Pair 3 - one white and one blue.

Pair 4 - one brown and one orange.

OUTSIDE DIAMETER

Cable shall have a maximum outside diameter of 0.235" (5.969 mm).

CABLE

The WN08-3GY cable shall contain four twisted pairs. The eight conductors shall be individually insulated #24 gauge soft-drawn copper. Each pair shall be twisted together with a one and one-half inch (3.81 cm) left hand lay. The four pairs shall be assembled by twisting them together with a one and one-half inch (3.81 cm) left hand lay and covering with clear polyester tape. Additionally, a nylon rip cord shall be provided.

The DC resistance of the #22AWG conductors shall not be more than 16.14 ohms per thousand feet (304.8 m) of conductor at 20° C (68° F). The cable shall be UL listed per subject 13 for type CL2 cable.

Wire insulation shall be colored polyvinyl chloride (PVC) with a minimum thickness of 0.010" (0.254 mm). Cotton or other insulating materials which deteriorate with age shall not be acceptable. Wire color code shall be: pair one - one red and one green, pair two - one yellow and one black, pair three - one white and one blue, pair four - one brown and one orange.

The conductors shall be covered and protected by an outer jacket of polyvinyl chloride with a minimum thickness of 0.025" (0.635 mm). The outer jacket shall be smooth and of good appearance. The jacket shall be easily stripped from the cable; but shall be tight enough to permit drawing the cable around sharp bends without the jacket sliding along the core or breaking.

The cable shall bear the EXECUTONE trademark with the approved cable model number either embossed or printed on the cable and shall be finished in EXECUTONE standard Metalustre. Additionally, the cable shall be marked to show conformance with "UL Subject 13 for Type CL2" at each place the EXECUTONE marking appears. If other than EXECUTONE cable is supplied, contractor shall obtain architect's approval after submitting a certified copy of test report on a sample coil of the cable from the lot to be supplied. The outside diameter of the cable shall be 0.235" (5.969 mm).

WN05-1

CABLE

° UL LISTED PER UL SUBJECT 13 FOR TYPE CL2

° EASY TO STRIP

° RODENT RESISTANT OUTER JACKET

° FLEXIBLE

° ABRASION RESISTANT





DESCRIPTION

Cable containing five conductors arranged in two groups. Conductors polyvinyl chloride (PVC) insulated and protected by an outer jacket.

GAUGE AND TYPE

Group 1 - Two insulated #22AWG solid conductors, twisted together with one #22AWG bare drain wire, and covered by metallized shielding tape.

Group 2 - Two insulated #22AWG solid conductors

Group 2 - Two insulated #22AWG solid conductors twisted together.

ASSEMBLY

Two groups assembled by cabling them together with a 6" (15.24 cm) left hand lay.

INSULATION

Conductors - Colored polyvinyl chloride with minimum thickness of 0.015" (0.381 mm).

Outer Jacket - Polyvinyl chloride with minimum thickness of 0.020" (0.508 mm).

SHIELDING

Metallized tape (lamiglas type) overlapped for 100% shielding. Crosstalk factor of -130 dB or better between shielded pairs.

DC RESISTANCE

#22AWG - 16.14 ohms maximum per 1,000 feet (304.8 m) at 20° C (68° F).

UL LISTED

Cable is UL listed per subject 13 for Type CL2 cable.

CABLE FINISH

Outer jacket color is EXECUTONE standard Metalustre.

WIRE COLOR CODE

Group 1 - one white, one red, and one bare drain wire.

Group 2 - one green and one black.

OUTSIDE DIAMETER

Cable shall have a maximum outside diameter of 0.230" (5.840 mm).

CABLE

The WN05-1 cable shall contain five conductors arranged in two groups. Group one shall consist of one pair of individually insulated #22AWG solid conductors twisted together with one #22AWG solid bare drain wire. Group one shall be covered with metallized tape (lamiglas type) overlapped for 100% shielding. Group two shall consist of one pair of individually insulated #22AWG solid conductors twisted together. The wire shall be certified to have a crosstalk factor of -130dB or better per 500 foot (152.4 m) coil. The two groups shall be assembled by cabling them together with a six inch (15.24 cm) left hand lay.

The DC resistance of the #22AWG conductors shall not be more than 16.14 ohms per thousand feet (304.8 m) of conductor at 20° C (68° F). The cable shall be UL listed per subject 13 for type CL2 cable.

Wire insulation shall be colored polyvinyl chloride (PVC) with a minimum thickness of 0.015" (0.381 mm). Cotton or other insulating materials which deteriorate with age shall not be acceptable. Wire color code shall be: group one - one white, one red, and one drain wire, group two - one green and one black.

The conductors shall be covered and protected by an outer jacket of polyvinyl chloride with a minimum thickness of 0.020" (0.508 mm). The outer jacket shall be smooth and of good appearance. The jacket shall be easily stripped from the cable; but shall be tight enough to permit drawing the cable around sharp bends without the jacket sliding along the core or breaking.

The cable shall bear the EXECUTONE trademark with the approved cable model number either embossed or printed on the cable and shall be finished in EXECUTONE standard Metalustre. Additionally, the cable shall be marked to show conformance with "UL Subject 13 for Type CL2" at each place the EXECUTONE marking appears. If other than EXECUTONE cable is supplied, contractor shall obtain architect's approval after submitting a certified copy of test report on a sample coil of the cable from the lot to be supplied. The outside diameter of the cable shall be 0.230" (5.840 mm).

WN04-2GY CABLE

- ° UL LISTED PER UL SUBJECT 13 FOR TYPE CL2
- ° EASY TO STRIP
- ° RODENT RESISTANT OUTER JACKET
- ° FLEXIBLE
- O ABRASION RESISTANT





DESCRIPTION

Cable containing four conductors. Conductors polyvinyl chloride (PVC) insulated and protected by an outer jacket.

GAUGE AND TYPE

Four conductors #22AWG consisting of 7 strands of #30AWG soft-drawn copper wire, bunch stranded with a maximum lay of 7/8" (2.22 cm).

ASSEMBLY

Four insulated conductors twisted together with a 6" (15.24 cm) left hand lay.

INSULATION

Conductors - Colored PVC.

Outer Jacket - PVC with minimum thickness of 0.020" (0.508 mm).

DC RESISTANCE

#22AWG - 16.14 ohms maximum per 1,000 feet (304.8 m) at 20° C (68° F).

UL LISTED

Cable is UL listed per subject 13 for Type CL2 cable.

CABLE FINISH

Outer jacket color is EXECUTONE standard Metalustre.

WIRE COLOR CODE

One red conductor, one black conductor, one yellow conductor, and one green conductor.

OUTSIDE DIAMETER

Cable shall have a maximum outside diameter of 0.200" (5.08 mm).

CABLE

The WN04-2GY cable shall contain four conductors. The four conductors shall be individually insulated #22AWG consisting of 7 strands of #30AWG soft-drawn copper, bunch stranded with a maximum lay of 7/8" (2.22 cm). The two insulated conductors shall be twisted together with a six inch (15.24 cm) left hand lay.

The DC resistance of the #22AWG conductors shall not be more than 16.14 ohms per thousand feet (304.8 m) of conductor at 20° C (68° F). The cable shall be UL listed per subject 13 for type CL2 cable.

Wire insulation shall be colored polyvinyl chloride (PVC) with a minimum thickness of 0.016" (0.254 mm). Cotton or other insulating materials which deteriorate with age shall not be acceptable. Wire color code shall be: one red conductor, one black conductor, one yellow conductor, and one green conductor.

The conductors shall be covered and protected by an outer jacket of polyvinyl chloride with a minimum thickness of 0.020" (0.508 mm). The outer jacket shall be smooth and of good appearance. The jacket shall be easily stripped from the cable; but shall be tight enough to permit drawing the cable around sharp bends without the jacket sliding along the core or breaking.

The cable shall bear the EXECUTONE trademark with the approved cable model number either embossed or printed on the cable and shall be finished in EXECUTONE standard Metalustre. Additionally, the cable shall be marked to show conformance with "UL Subject 13 for Type CL2" at each place the EXECUTONE marking appears. If other than EXECUTONE cable is supplied, contractor shall obtain architect's approval after submitting a certified copy of test report on a sample coil of the cable from the lot to be supplied. The outside diameter of the cable shall be 0.200" (5.08 mm).

WN03-2

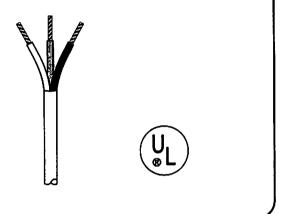
° UL LISTED PER UL SUBJECT 13 FOR TYPE CL2

° EASY TO STRIP

° RODENT RESISTANT OUTER JACKET

° FLEXIBLE

° ABRASION RESISTANT



DESCRIPTION

Cable containing three twisted conductors. Conductors polyvinyl chloride (PVC) insulated and protected by an outer jacket.

GAUGE AND TYPE

Three conductors #20AWG consisting of 7 strands of #28AWG soft-drawn copper wire, bunch stranded with a maximum lay of 7/8" (2.22 cm).

ASSEMBLY

Three insulated conductors twisted together with a 1-1/2" (3.81 cm) left hand lay.

INSULATION

Conductors - Colored PVC with minimum thickness of 0.016" (0.254 mm).

Outer Jacket - PVC with minimum thickness of 0.030" (0.762 mm).

DC RESISTANCE

#20AWG - 10.15 ohms maximum per 1,000 feet (304.8 m) at 20° C (68° F).

UL LISTED

Cable is UL listed per UL subject 13 for Type CL2 cable.

CABLE FINISH

Outer jacket color is EXECUTONE standard Metalustre.

WIRE COLOR CODE

One red conductor, one black conductor, one white conductor.

OUTSIDE DIAMETER

Cable shall have a maximum outside diameter of 0.220" (5.588 mm).

CABLE

The WN03-2 cable shall contain one, three twisted conductors. The three conductors shall be individually insulated #22AWG consisting of 7 strands of #20AWG soft-drawn copper, bunch stranded with a maximum lay of 7/8" (2.22 cm). The two insulated conductors shall be twisted together with a one and one-half inch (3.81 cm) left hand lay.

The DC resistance of the #20AWG conductors shall not be more than 10.15 ohms per thousand feet (304.8 m) of conductor at 20° C (68° F). The cable shall be UL listed per UL subject 13 for type CL2 cable.

Wire insulation shall be colored polyvinyl chloride (PVC) with a minimum thickness of 0.016" (0.254 mm). Cotton or other insulating materials which deteriorate with age shall not be acceptable. Wire color code shall be: one red conductor, one black conductor, and one white conductor.

The conductors shall be covered and protected by an outer jacket of PVC. The outer jacket shall be smooth and of good appearance. The jacket shall be easily stripped from the cable; but shall be tight enough to permit drawing the cable around sharp bends without the jacket sliding along the core or breaking.

The cable shall bear the EXECUTONE trademark with the approved cable model number either embossed or printed on the cable and shall be finished in EXECUTONE standard Metalustre. Additionally, the cable shall be marked to show conformance with "UL Subject 13 for Type CL2" at each place the EXECUTONE marking appears. If other than EXECUTONE cable is supplied, contractor shall obtain architect's approval after submitting a certified copy of test report on a sample coil of the cable from the lot to be supplied. The outside diameter of the cable shall be 0.220" (5.588 mm).

WN02-4GY

- ° UL LISTED PER UL SUBJECT 13 FOR TYPE CL2
- ° EASY TO STRIP
- ° RODENT RESISTANT OUTER JACKET
- ° FLEXIBLE
- ° ABRASION RESISTANT





DESCRIPTION

Cable containing one twisted pair. Conductors polyvinyl chloride (PVC) insulated and protected by an outer jacket.

GAUGE AND TYPE

Two conductors #22AWG consisting of 7 strands of #30AWG soft-drawn copper wire, bunch stranded with a maximum lay of 7/8" (2.22 cm).

ASSEMBLY

Two insulated conductors twisted together with a 3" (7.62 cm) left hand lay.

INSULATION

Conductors - Colored PVC.
Outer Jacket - PVC.

DC RESISTANCE

#22AWG - 16.14 ohms maximum per 1,000 feet (304.8 m) at 20° C (68° F).

UL LISTED

Cable is UL listed per subject 13 for Type CL2 cable.

CABLE FINISH

Outer jacket color is EXECUTONE standard Metalustre.

WIRE COLOR CODE

One red conductor, one green conductor.

OUTSIDE DIAMETER

Cable shall have a maximum outside diameter of 0.180" (4.572 mm).

CABLE

The WN02-4GY cable shall contain one twisted pair of conductors. The two conductors shall be individually insulated #22AWG consisting of 7 strands of #30AWG soft-drawn copper, bunch stranded with a maximum lay of 7/8" (2.22 cm). The two insulated conductors shall be twisted together with a three inch (7.62 cm) left hand lay.

The DC resistance of the #22AWG conductors shall not be more than 16.14 ohms per thousand feet (304.8 m) of conductor at 20° C (68° F). The cable shall be UL listed per UL subject 13 for type CL2 cable.

Wire insulation shall be colored polyvinyl chloride (PVC). Cotton or other insulating materials which deteriorate with age shall not be acceptable. Wire color code shall be: one red conductor and one green conductor.

The conductors shall be covered and protected by an outer jacket of PVC. The outer jacket shall be smooth and of good appearance. The jacket shall be easily stripped from the cable, but shall be tight enough to permit drawing the cable around sharp bends without the jacket sliding along the core or breaking.

The cable shall bear the EXECUTONE trademark with the approved cable model number either embossed or printed on the cable and shall be finished in EXECUTONE standard Metalustre. Additionally, the cable shall be marked to show conformance with "UL Subject 13 for Type CL2" at each place the EXECUTONE marking appears. If other than EXECUTONE cable is supplied, contractor shall obtain architect's approval after submitting a certified copy of test report on a sample coil of the cable from the lot to be supplied. The outside diameter of the cable shall be 0.180" (4.572 mm).

- ° UL-LISTED PER UL SUBJECT 13 FOR TYPE CL2
- ° EASY TO STRIP
- ° RODENT-RESISTANT OUTER JACKET
- ° FLEXIBLE
- ° ABRASION RESISTANT





DESCRIPTION

Cabling containing one twisted pair. Conductors polyvinyl chloride (PVC) insulated and protected by an outer jacket.

CONDUCTOR

Each conductor is #16AWG consisting of twenty-six strands of #30AWG soft-drawn solid copper wire, bunch stranded with a maximum lay of 1" (2.54cm).

ASSEMBLY

Two insulated conductors assembled by cabling them together with a 3" (7.62cm) left hand lay.

INSULATION

Two conductors PVC insulated with minimum thickness of 0.031" (0.793mm).

DC RESISTANCE

#16AWG - 4.02 ohms maximum per 1,000 feet (304.8m) at 20° C (68° F).

UL LISTING

Cable is UL Listed per subject 13 for Type CL2 cable.

CABLE FINISH

Outer jacket color is EXECUTONE Standard Metalustre.

WIRE COLOR CODE

One conductor bare, one conductor tinned.

OUTSIDE DIAMETER

Cable shall have a maximum outside diameter of 0.203" (0.516cm).

CABLE

The WN02-3 cable shall contain one twisted pair of conductors. Each conductor shall be #16AWG consisting of twenty-six strands of #30AWG soft-drawn solid copper wire, bunch stranded with a maximum lay of 1" (2.54cm). The two conductors shall be assembled by cabling them together with a three-inch (7.62cm) left-hand lay.

The cable shall be UL-listed per Standard 13 for type CL2 cable.

The DC resistance of the #16AWG conductors shall not be more than 4.02 ohms per thousand feet (304.8m) of conductor at 20° C (68° F).

Conductor insulation shall be PVC with minimum thickness of 0.031" (0.793mm). Cotton or other insulating materials which deteriorate with age shall not be acceptable. Wire color code shall be: one conductor bare, one conductor tinned.

The cable shall bear the Executone trademark with the approved cable model number printed on the cable and shall be finished in EXECUTONE Standard Metalustre. Additionally, the cable shall be marked to show conformance with "UL Subject 13 for Type CL2" at each place the Executone marking appears.

The outside diameter of the cable shall be 0.203" (0.516cm).

WN02-2

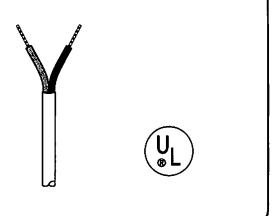
° UL LISTED PER UL SUBJECT 13 FOR TYPE CL2

° EASY TO STRIP

° RODENT RESISTANT OUTER JACKET

° FLEXIBLE

° ABRASION RESISTANT



DESCRIPTION

Cable containing two twisted conductors. Conductors polyvinyl chloride (PVC) insulated and protected by an outer jacket.

GAUGE AND TYPE

Two conductors #20AWG consisting of 7 strands of #28AWG soft-drawn copper wire, bunch stranded with a maximum lay of 7/8" (2.22 cm).

ASSEMBLY

Two insulated conductors twisted together with a 1-1/2" (3.81 cm) left hand lay.

INSULATION

Conductors - Colored PVC with minimum thickness of 0.010" (0.254 mm).

Outer Jacket - PVC with minimum thickness of 0.030" (0.762 mm).

DC RESISTANCE

#20AWG - 10.15 ohms maximum per 1,000 feet (304.8 m) at 20° C (68° F).

UL LISTED

Cable is UL listed per UL subject 13 for Type CL2 cable.

CABLE FINISH

Outer jacket color is EXECUTONE standard Metalustre.

WIRE COLOR CODE

One red conductor, one black conductor.

OUTSIDE DIAMETER

Cable shall have a maximum outside diameter of 0.230" (5.156 mm).

CABLE

The WN02-2 cable shall contain two twisted conductors. The two conductors shall be individually insulated #20AWG consisting of 7 strands of #28AWG soft-drawn copper, bunch stranded with a maximum lay of 7/8" (2.22 cm). The three insulated conductors shall be twisted together with a one and one-half inch (3.81 cm) left hand lay.

The DC resistance of the #20AWG conductors shall not be more than 10.15 ohms per thousand feet (304.8 m) of conductor at 20° C (68° F). The cable shall be UL listed per subject 13 for type CL2 cable.

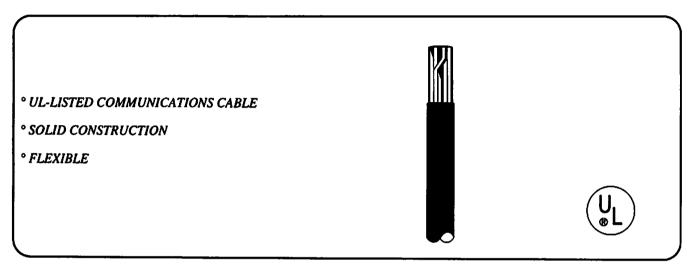
Wire insulation shall be colored polyvinyl chloride (PVC) with a minimum thickness of 0.010" (0.254 mm). Cotton or other insulating materials which deteriorate with age shall not be acceptable. Wire color code shall be: one red conductor and one black conductor.

The conductors shall be covered and protected by an outer jacket of PVC with a minimum thickness of 0.030" (0.762 mm). The outer jacket shall be smooth and of good appearance. The jacket shall be easily stripped from the cable; but shall be tight enough to permit drawing the cable around sharp bends without the jacket sliding along the core or breaking.

The cable shall bear the EXECUTONE trademark with the approved cable model number either embossed or printed on the cable and shall be finished in EXECUTONE standard Metalustre. Additionally, the cable shall be marked to show conformance with "UL Subject 13 for Type CL2" at each place the EXECUTONE marking appears. If other than EXECUTONE cable is supplied, contractor shall obtain architect's approval after submitting a certified copy of test report on a sample coil of the cable from the lot to be supplied. The outside diameter of the cable shall be 0.203" (5.156 mm).

421764 - PVC 422824 - Pienum

CABLE



MODEL 421764:

DESCRIPTION

Cabling containing four pair run parallel. Conductors polyvinyl chloride (PVC) insulated and protected by an outer jacket.

CONDUCTOR

Each conductor is #22AWG consisting of solid copper wire.

ASSEMBLY

Conductors are twisted to varying left hand lays to form pairs.

INSULATION

PVC insulated with minimum thickness of 0.006" (0.015mm).

DC RESISTANCE

#22AWG - 16.14 ohms maximum per 1,000 feet (304.8m) at 20° C (68° F).

WIRE COLOR CODE

White/blue, white/orange, white/green, white/brown.

OUTSIDE DIAMETER

Cable shall have a maximum outside diameter of 0.175" (0.45cm) nominal.

MODEL 422824:

DESCRIPTION

Cabling containing four pair run parallel. Conductors insulated and protected by an outer plenum jacket.

CONDUCTOR

Each conductor is #22AWG consisting of solid copper wire.

ASSEMBLY

Conductors are twisted to varying left hand lays to form pairs.

INSULATION

Plenum insulated with minimum thickness of 0.006" (0.015mm).

DC RESISTANCE

#22AWG - 16.14 ohms maximum per 1,000 feet (304.8m) at 20° C (68° F).

WIRE COLOR CODE

White/blue, white/orange, white/green, white/brown.

OUTSIDE DIAMETER

Cable shall have a maximum outside diameter of 0.165" (0.42cm) nominal.

CABLE

The 421764 communications cable shall contain four pairs of conductors run parallel with polyvinyl chloride (PVC) jacket. Each conductor shall be #22AWG consisting of solid copper wire. Conductors are twisted to varying left hand lays to form pairs.

The cable shall be UL-listed per Subject 444 - Communications Cable.

The DC resistance of the #22AWG conductors shall not be more than 16.14 ohms per thousand feet (304.8m) of conductor at 20° C (68° F).

Conductor insulation shall be PVC with minimum thickness of 0.006" (0.015mm). Wire color code shall be: white/blue, white/orange, white/green, white/brown.

The outside diameter of the cable shall be 0.175" (0.45cm) nominal.

The 422824 communications cable shall contain four pair of conductors run parallel with plenum jacket. Each conductor shall be #22AWG consisting of solid copper wire. Conductors are twisted to varying left hand lays to form pairs.

The cable shall be UL-listed per Subject 444 - Communications Cable.

The DC resistance of the #22AWG conductors shall not be more than 16.14 ohms per thousand feet (304.8m) of conductor at 20° C (68° F).

Conductor insulation shall be plenum with minimum thickness of 0.006" (0.015mm). Wire color code shall be: white/blue, white/orange, white/green, white/brown.

The outside diameter of the cable shall be 0.165" (0.42cm) nominal.

CARE/COMBILEX

Nurse Call System

	System Database ☐ System Layout ☐ General Information ☐ Station Unit Data Sheets ☐ Nurse Control Station Data Sheets ☐ System Data Sheets ☐ Service Log	
Customer Name:		
Contact:		
Street Address:		
City/State:	Zip:	
Telephone:	FAX:	
System Number/Location:	·	
System Database Number:	•	
Distributor:		
Contact:		
City/State:	Zip:	
Telephone:	FAX:	
Distributor Order No.:		
Factory Order No.:	Sales Person:	
	Installer:	
	For Service, Call:	



System Layout





General Information

IIIS	tallation date	•				
Cu	tover date: _					
Pe	nalty clause ((if any)				
Ch	eck one of th	e following:				
	New installat	ion	Retrofit -	Type of system	replaced:	
	r retrofit insta W1	llations, check the t	type of bac		existing: vimensions:	
Wi	ring details:					
	Zone Number	Number of Patient Station	ons Numl	per of Duty Stations	Number of Staff Stations	
	1	Number of Patient Static	ons Numl	per of Duty Stations	Number of Staff Stations	
	1 2	Number of Patient Static	ons Numl	per of Duty Stations	Number of Staff Stations	
	1	Number of Patient Static	ons Numl	per of Duty Stations	Number of Staff Stations	
	1 2 ()	Number of Patient Static	ons Numl	per of Duty Stations	Number of Staff Stations	
	1 2 3	Number of Patient Static	ons Numl	per of Duty Stations	Number of Staff Stations	
	1 2 3 4	Number of Patient Static	ons Numl	per of Duty Stations	Number of Staff Stations	

Station Unit Data Sheet



8	, ,â	S CONTRACTOR OF THE PROPERTY O	Enter NCS(e)	ig _{all}	,		Emerge E	Out Out Sellon Mode
UU - ZZ	01 - 96	Enter NCS(e)	Enter NCS(s)	3 - 5 Digits	01 - 99	Y or N	YorN	Duty or Staff
					15.42.00			

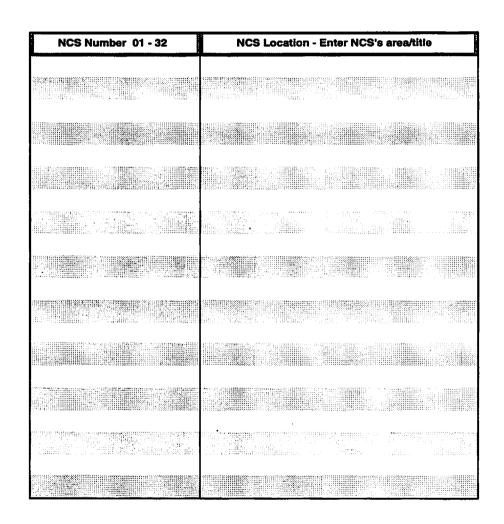
	8					5 F/S		

Note:

1. UU is the unit number; ZZ is the zone number.



Nurse Control Station Data Sheet A



Commence of the Street

Note:

1. The number of NCSs installed is relative to the number of ports available in the system.

Nurse Control Station Data Sheet B



N	urse	Control	Station	Programming
---	------	---------	---------	-------------

Nurse Control S	Station Progra	<u>amming</u>					
NCS Number	Po	ort					
Location Name _	<u>.</u>						
[K]eys	01	[].		02	[]	
Key Code/Sub-K	tey Code 03	[].		04	[]	
	05	[]		06	[]	
	07	[]		08	[]	
Key Code	Sub-Ke	y Code	Descr	iption			
500-549	1-99999		Key-be	ed number			
			Sub-ke	y bed number	r		

Key Code	Sub-Key Code	Description
500-549	1-99999	Key-bed number
		Sub-key bed number
550	0	Page all NCSs
550	1-64	Page a Zone
551	1-64	Page a Page Group
552	1-4	External Page
555	1-64	Monitor a Zone
556	1-64	Monitor a Page Group
560	0	Call a NCS-dial NCS #
560	1-32	Call a NCS-direct
565	0	Off-duty-dial NCS #

NCS Settings in System:

Reminder Tone(on/off)	Page Beep Tone(on/off)
Page Time-out(01-255 seconds)	Station Beep Tone (on/off)
Hold Timer(01-255 seconds)	
Overtime Reminder(01-15 minutes)	Automatic Call Answer(Y or N)
Tone Mute	



Nurse Control Station Data Sheet C

Direct Station	n Selection Programming				
DSS Number _	Port				
Attached to NC	CS #				
[K]eys	Key Code Sub-Key Code				
][-)[][][][][][
[][_][][][][][] [·
[][_][][][][][] [. _
[][_] [] [][][][] [· _ _
[] []] [] [][][] [] [
[][_] [] [][]] [

Key Code	Sub-Key Code	Description
500-549	1-99999	Key-bed number
		Sub-key bed number
550	0	Page all NCSs
550	1-64	Page a Zone
551	1-64	Page a Page Group
552	1-4	External Page
555	1-64	Monitor a Zone
556	1-64	Monitor a Page Group
560	0	Call a NCS-dial NCS #
560	1-32	Call a NCS-direct
565	0	Off-duty-dial NCS #

System Data Sheet



Priority Nomenclaure

Priority	Default	New Name
1	Code Blue	
2	N/A	
3	N/A	
	Emergency	
5	Patient Cali	

Time and Date Format

Time (12 or 24 hr)	
Date (mm/dd/yy or dd/mm/yy)	



Technician's Service Log

Date	Room or Station	Condition	Cause	Service Rendered	Technician
		Section 1995			
				Ale Sala	

On-Site Trouble Report



Date	Room/Station Be	ed	Condition/Problem	Person Reporting Problem
2.7				



Hardware Worksheet Data Sheet A

Nomenclature	Notes	Part No.	No. Required
Central Equipment			
Equipment Cabinet, Single-Width	Surface/Wall Mount	A47094	
Equipment Cabinet, Dual-Width	Surface/Wall Mount	A47445	
Auxiliary Panel		36280-1	
Main Control Unit	8 digital ports/1200	36100-1	
	baud modem PCB		
(2x4) Expansion card	12 total digital ports	23120	
(4x8) Expansion Unit	20 total digital ports	36200-1	
(4x8) Expansion card	28 total digital ports	23220	
Power Supply Module	1 req. each Main	36290-1	
	Control/Expansion Unit		
12V Battery	2 each PSM	34-04-12007	
M66 Block		49-07-00001	
M66 Block w/RJ11	Alternative	49-07-00002	
Female-female 25-pr cable	Main Control Unit, (4x8) card and (4x8)	01070-1	
	Expansion Unit require 1 each		
Equipment Panel	Furnished w/backplane,	36300-1	
	2 ribbon cables, M66 block		
M66 Block	1 furnished with panel	49-07-00001/-00002	
50-pr. ribbon cable	2 furnished with panel	36318-1	
ASI card	1 card=24 annunciator lines	36320-1	
Flasher card	1 per Equipment Panel	36340-1	·
Power Supply Module	1 per Equipment Panel	CCPSM/BBS	······································
12V Battery	2 each PSM	HPNBATT	
Station Units and Supporting Hardy	rare		
Single Patient Station		CCP1S/W43	
Dual Patient Station		CCP2S/W43	····
Duty/Staff Station		CCDSS/W43	
Code Blue Station		36920-1	
Emergency Station		36900-2	
Single Patient Sideguard		CCPCS/W43	
Dual Patient Sideguard		3080215	
Station Unit Lamp		30-23-00001	
9-Pin Edge Connector		AA38089	
12-Pin Edge Connector		AA38642	
16-Pin Connector Assembly		AA39028	
Backbox Adapter Kit	If installing in existing	AA38574	
	W1, W2, or W330		
6-Pin IDC Connector		15-06-50006	
Strain Relief		15-06-51006	
		15-06-50003	
3-Pin IDC Connector		13-00-30003	

Hardware Worksheet Data Sheet B



Nomenclature	Notes	Part No.	No. Required
Nurse Control Station and Compon	ients		
Nurse Control Station		36400-1	
Receptacle	1 per NCS	36470-1	
NCS cable		36476-1	
Direct Station Selection console		36500-1	
Call Origination Devices			
3-Button Patient Control Unit		PCU-3	
Call Button		M282	
8' Call Button		M18A	
Geriatric Call Cord		M88	
Call Cord for Oxygen Environment		M518X	
Entertainment and Environmental	Interface and Supporting Hardware		
Single TV/Light Interface		33920-1	
Dual TV/Light Interface		33920-2	
Single Entertainment Interface		31780-2	
Dual Entertainment Interface		31770-2	
TV Interface		J7390RCS/W43P	
Single Comfort Control Unit		J7377C1S/W43P	
Dual Comfort Control Unit		J7377C2S/W43P	
Single Selector Unit		J7376R1S/W43P	
Dual Selector Unit		J7376R2S/W43P	
22-Pin Connector Assembly		AA38696	
2-Pin IDC Connector	 	15-06-50002	
Strain Relief		15-06-51002	
8-Pin IDC Connector		15-06-50008	
Strain Relief		15-06-51008	
9-Pin IDC Connector	_	15-06-50009	
Strain Relief		15-06-51009	
Power Supply		M-217/4101	
Auxiliary Signaling Devices			3.00
Zone Control Module		EX-ZCM3	
Dome Light		MDLS/W42	
White Lens		A44376-1W	
Red Lens		A44376-1R	
Blue Lens		A44376-1B	
Lamp		30-23-01820	
Lamp Socket		A44835	
Backbox			
Single-Gang	4-11/16 x 4-11/16 x 2-7/8		
Two-Gang	4-11/16 x 4-11/16 x 2-7/8		
Three-Gang	8-13/16 x 4-1/2 x 3-5/16		



Hardware Worksheet Data Sheet C

Equipment Panel Configuration

	determine the number of ASIs (Analog Station Interface cards) and Equipment Panel(s) a system requires, form the following calculations:
1.	Total # Annunciator Lines* divided by 24 = number of ASIs (round up to the next whole number) * 1 for each single or dual patient, duty/staff station, single sideguard station, standalone emergency and code blue station, 2 for dual sideguard station
2.	Total # ASIs divided by 3 = number of Equipment Panels (round up to the next whole number)

Auxiliary Panel Configuration

To determine the number of digital ports and Main Control/Expansion Unit(s) required by a system, list each NCS, DSS, and ASI* required. To determine the number of ASIs the system will utilize, reference step 1 in the Equipment Panel Configuration.

Board/Card Main Control Unit	Port # Designation 1	n Board/Card (2x4) Expansion card	Port # Designation 9 10 11 12
Expansion Unit	13 14 15 16 17 18 19 20	(4x8) Expansion card	21 22 23 24 25 26 27 28

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RECORD OF CHANGES

The Record of Changes is used to keep you up-todate with changes and variations in equipment. As Product Updates (formerly Technical Facts) are issued, list them here and follow the instructions given in the particular update.

The combination of Product Updates and Record of Changes will provide you with a chronological record of all changes made to your system.

To ensure that you are using the most current product information, check the Record of Changes and review all pertinent updates.

Key:

- 1. Information released in this update has been integrated into the manual as replacement pages. Therefore this update is not contained in the update section of this manual.
- 2. The entire update has been included in the update section of this manual.

Update No.	Date	Description	
			
			
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